INTRODUCCIÓN

El excelente libro *Manual para el proyecto de estructuras de concreto armado para edificaciones* de los Ingenieros **Enrique Arnal** y **Salomón Epelboim**; realizado en el año 1.984 bajo solicitud y auspicios del Ministerio del Desarrollo Urbano de la República de Venezuela; editado por la Fundación Juan José Aguerrevere, Fondo Editorial del Colegio de Ingenieros de Venezuela; y basado en la Norma de *Estructuras de concreto armado para edificios* Covenin-Mindur 1753, en la Norma para *Edificaciones antisísmicas* Covenin-Mindur 1756, en la Norma de *Acciones mínimas para el proyecto de edificaciones* Covenin-Mindur 2002, en la Norma para el *Cálculo de la acción del viento en el proyecto de edificaciones* Covenin-Mindur y en la vasta experiencia de los autores, ha sido durante muchos años referencia obligada para el diseño de estructuras de concreto armado.

El éxito de este libro fue notable, y se agotó la existencia de todas sus ediciones. Actualmente solo circulan los ejemplares que tenemos quienes pudimos adquirirlo en su oportunidad. Más allá de ser un manual, esta obra constituye un libro de texto.

Mucha de la información contenida en este manual es perecedera, puesto que está referenciada a la normativa vigente para la época. Sin embargo, contiene información invaluable de carácter teórico, además de criterios para el buen diseño, que trascienden al tiempo y a las sucesivas normas. Es por este motivo que me he dado a la tarea de digitalizar algunos capítulos que siguen –y seguirán- vigentes, para el libre acceso de aquellos colegas que lo requieran. Cabe acotar que queda a juicio del ingeniero proyectista seguir los criterios expuestos en este texto, cuando sean aplicables, puesto que no son prescriptivos.

Debido a que es un producto que fue realizado por el gobierno nacional, y cuya data es de hace 25 años, no pienso que no pueda pertenecer al dominio público, tal como hoy día ocurre con las Normas Covenin. Esta difusión pública se ha realizado sin el permiso previo para ello.

Antolín Martínez A.
Puerto Ordaz, Julio 2010

CAPÍTULO 7 – SECCIÓN 7.5

Diseño de losas reticulares.

ASPECTOS GENERALES

Los entrepisos reticulare se diferencian de las losas nervadas en dos direcciones en que éstas tienen vigas perimetrales muy rígidas, que son consideradas indeformables, mientras que aquellas se apoyan directamente en las columnas, sin vigas rígidas, de modo que su perímetro es considerado deformable.

Generalmente en el entrepiso reticular los nervios que pasan cerca de las columnas, llamados nervios de capitel, son más anchos que los demás, llamados nervios de tramo, pero todos tienen la misma altura.

PROCEDIMIENTOS DE CALCULO

Las solicitaciones en los elementos de los retículos se han calculado en este caso por el "Método de los Desplazamientos". Otros procedimientos de análisis son el método de Doménico Parma y el de Anatole Zagustin.

Siguiendo el criterio de A. Zagustin se despreciaron los momentos torsores en los nervios del retículo.

TABLAS DE RETICULOS

Se incluyen tablas para retículos de las siguientes modulaciones:

5 x 5, 6 x 6, 6 x 7, 6 x 8, 7 x 7, 7 x 8, 7 x 9, 7 x 10, 8 x 8, 8 x 9, 8 x 10.

Para todos ellos se han considerado 6 casos de continuidad, de acuerdo con la práctica corriente en placas doblemente armadas, pero considerando que el perímetro tiene deflexiones verticales.

En las tablas se dan coeficientes para calcular los momentos y cortes en los nervios representativos del retículo, en función de la carga nodal P y de la distancia S entre nodos. Todos los recuadros definidos por los nodos son cuadrados de dimensión S x S.

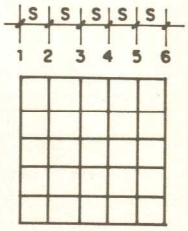
En el cálculo de las tablas se consideró que los retículos están simplemente apoyados en las columnas.

BIBLIOGRAFÍA

- Asprino, Miguel y Rodríguez Gil, Fernan
"Entrepisos Reticulares"
Tesis de Grado, Universidad Central de Venezuela.
Multigrafiada
Caracas, 1954

TABLA Nº 7.11

LOSAS RETICULARES - RETICULO DE 5 x 5
COEFICIENTES DE MOMENTOS



NERVIO TIPICO

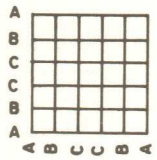
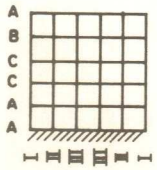
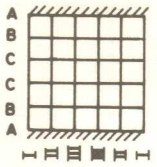
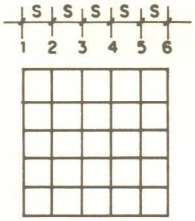
CASO	NERV.	μ = M/P.s					
		1	2	3	4	5	6
① 	A	0.0	3.00	3.60	3.60	3.00	0.0
	B	0.0	1.90	3.29	3.29	1.90	0.0
	C	0.0	0.10	0.60	0.60	0.10	0.0
② 	A	0.0	2.37	2.82	2.82	2.37	0.0
	B	0.0	2.69	4.10	4.10	2.69	0.0
	C	0.0	0.73	1.76	1.76	0.73	0.0
	I	-5.26	-0.13	1.81	2.53	2.30	0.0
	II	-2:51	-0.76	1.26	1.97	1.31	0.0
	III	-0.28	-0.10	-0.06	0.01	-0.11	0.0
③ 	A	0.0	1.92	2.04	2.04	1.92	0.0
	B	0.0	2.26	3.50	3.50	2.26	0.0
	C	0.0	0.81	1.93	1.93	0.81	0.0
	I	-3.79	+0.29	+1.60	-1.60	-0.29	-3.79
	II	-1.57	-0.26	1.04	1.04	-0.26	-1.57
	III	0.36	-0.03	-0.15	-0.15	-0.03	0.36

TABLA Nº 7. 11

LOSAS RETICULARES - RETICULO DE 5 x 5

COEFICIENTES DE MOMENTOS



NERVIO TIPICO

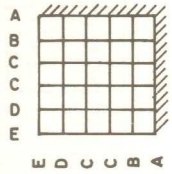
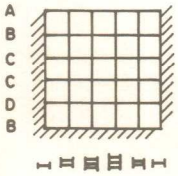
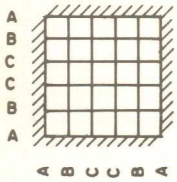
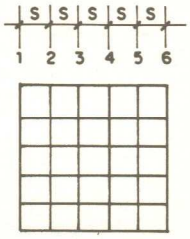
CASO	NERV.	μ = M/P.s					
		1	2	3	4	5	6
	A	0.0	1.79	1.72	1.29	0.28	-4.39
	B	0.0	1.96	2.67	1.84	-0.83	-3.99
	C	0.0	0.40	0.84	0.43	-0.48	-0.57
	D	0.0	1.04	1.57	1.00	-0.62	-1.98
	E	0.0	1.68	1.83	1.34	-0.06	-3.91
	A	-3.25	0.48	1.15	1.15	0.48	-3.25
	B	-2.70	-0.24	1.59	1.59	-0.24	-2.70
	C	-0.16	-0.19	+0.38	+0.38	-0.19	-0.16
	D	-1.19	-0.20	-0.79	-0.79	-0.20	-1.19
	I	-3.52	0.24	1.04	1.37	1.43	0.00
	II	-3.26	-0.69	1.51	2.20	1.60	0.00
	III	-0.68	-0.52	0.48	0.95	0.45	0.00
	A	-2.61	0.40	0.91	0.91	0.40	-2.61
	B	-2.17	-0.20	1.28	1.28	-0.20	-2.17
	C	-0.22	-0.20	+0.30	+0.30	-0.20	-0.22

TABLA Nº 7.12

LOSAS RETICULARES - RETICULO DE 5 x 5
COEFICIENTES DE FUERZA CORTANTE



NERVIO TIPICO

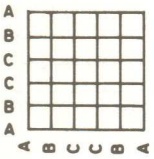
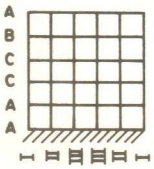
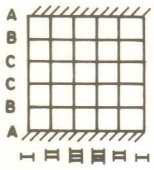
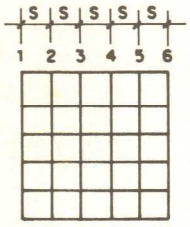
CASO	NERV.	ν = V/P				
		1-2	2-3	3-4	4-5	5-6
1 	A	3.00	0.60	0.0	-0.60	-3.00
	B	1.90	1.40	0.0	-1.40	-1.90
	C	0.10	0.50	0.0	-0.50	-0.10
2 	A	2.37	0.12	0.0	-0.12	-2.37
	B	2.69	1.42	0.0	-1.42	-2.69
	C	0.73	1.03	0.0	-1.03	-0.73
	I	5.13	1.94	0.71	-0.22	-2.30
	II	1.75	2.02	0.71	-0.66	-1.31
	III	-0.38	0.04	0.07	-0.12	-0.11
3 	A	1.92	0.12	0.0	-0.12	-1.92
	B	2.26	1.27	0.0	-1.27	-2.26
	C	0.81	1.12	0.0	-1.12	-0.81
	I	4.08	1.31	0.0	-1.31	-4.08
	II	1.31	1.30	0.0	-1.30	-1.31
	III	-0.39	-0.12	0.0	+0.12	+0.39

TABLA Nº 7.12

LOSAS RETICULARES- RETICULO DE 5 x 5
COEFICIENTES DE FUERZA CORTANTE



NERVIO TIPICO

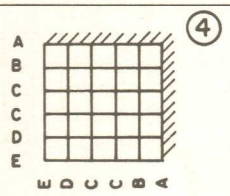
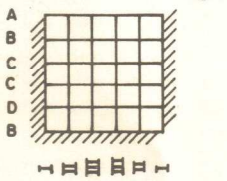
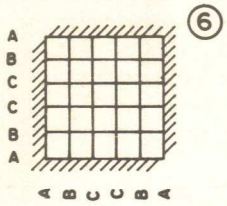
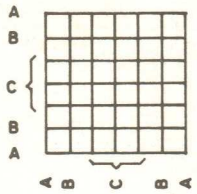
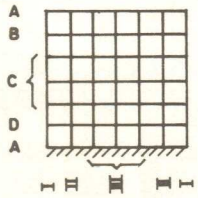
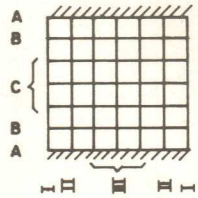
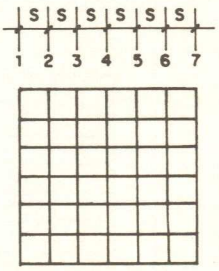
CASO	NERV.	ν = V/P				
		1-2	2-3	3-4	4-5	5-6
	A	1.79	-0.72	-0.43	-1.09	-4.68
	B	1.96	-0.71	-0.84	-2.66	-3.17
	C	0.40	0.44	-0.41	-0.91	-0.83
	D	1.04	0.54	-0.58	-0.61	-1.36
	E	1.68	0.15	-0.49	-1.39	-3.35
	A	3.73	0.66	0.00	-0.66	-3.73
	B	3.08	1.83	0.00	-1.83	-3.08
	C	-0.03	0.46	0.00	-0.46	+0.03
	D	0.99	0.99	0.00	-0.99	-0.99
	I	3.76	0.80	0.33	0.06	-1.43
	II	2.57	2.20	0.70	-0.60	-1.60
	III	0.16	0.99	0.47	-0.47	-0.48
	A	3.00	0.52	0.00	-0.52	-3.00
	B	1.98	1.48	0.00	-1.48	-1.98
	C	0.02	0.50	0.00	-0.50	-0.02

TABLA Nº 7.13

LOSAS RETICULARES - RETICULO DE 6 x 6
COEFICIENTES DE MOMENTOS

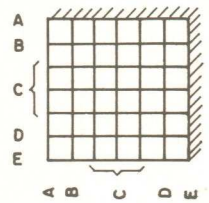
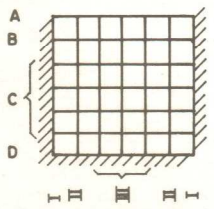
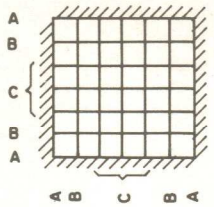
CASO	NERV.	μ = M/P.s						
		1	2	3	4	5	6	7
① 	A	0.0	4.37	5.25	5.46	5.25	4.37	0.0
	B	0.0	2.98	5.46	6.15	5.46	2.98	0.0
	C	0.0	0.18	1.17	1.65	1.17	0.18	0.0
② 	A	0.0	2.82	3.32	3.40	3.32	2.82	0.0
	B	0.0	4.21	5.92	6.33	5.92	4.21	0.0
	C	0.0	1.55	3.27	3.75	3.27	1.55	0.0
	D	0.0	2.26	4.19	4.78	4.19	2.26	0.0
	I	-1268	-3.78	0.40	2.52	3.31	3.04	0.0
	II	-4.78	-3.02	0.23	2.32	2.99	1.83	0.0
	III	0.33	0.24	-0.05	-0.38	-0.49	-0.34	0.0
③ 	A	0.0	2.21	2.62	2.77	2.62	2.21	0.0
	B	0.0	3.36	4.94	5.36	4.94	3.36	0.0
	C	0.0	1.36	3.07	3.64	3.07	1.36	0.0
	I	-8.25	-1.71	0.96	1.78	0.96	-1.71	-8.25
	II	-2.61	-1.32	0.73	1.44	0.73	-1.32	-2.61
	III	0.37	0.18	-0.17	-0.38	-0.17	0.18	0.37

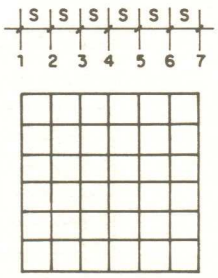


NERVIO TIPICO

TABLA Nº 7.13

LOSAS RETICULARES - RETICULO DE 6 x 6
COEFICIENTES DE MOMENTOS

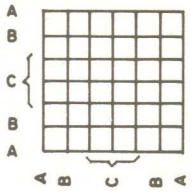
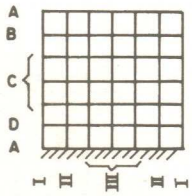
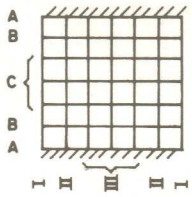
CASO	NERV.	μ = M/P.s						
		1	2	3	4	5	6	7
 (4)	A	0.0	1.97	2.01	1.58	0.28	-2.08	-9.54
	B	0.0	2.82	3.61	2.83	0.69	-3.40	-3.01
	C	0.0	0.88	1.69	1.43	0.41	-1.10	-1.65
	D	0.0	1.35	2.21	1.76	0.21	-2.25	-3.68
	E	0.0	2.00	2.15	1.63	0.28	-2.44	-8.49
 (5)	A	-6.30	-0.86	0.59	1.11	0.59	-0.86	-6.30
	B	-5.10	-1.55	1.14	1.93	1.14	-1.55	-5.10
	C	-1.91	-0.96	0.53	1.04	0.53	-0.96	-1.91
	D	-5.70	-1.16	0.66	1.21	0.66	-1.16	-5.70
	I	-7.67	-1.68	0.26	1.26	1.61	1.53	0.0
	II	-6.27	-2.78	0.54	2.29	2.88	2.21	0.0
	III	-1.45	-1.02	0.32	1.33	1.54	0.78	0.0
 (6)	A	-5.10	-0.72	0.49	0.90	0.49	-0.72	-5.10
	B	-3.90	-1.25	0.89	1.53	0.89	-1.25	-3.90
	C	-0.74	-0.42	0.41	0.75	0.41	-0.42	-0.74

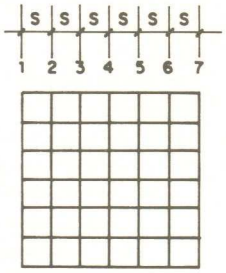


NERVIO TIPICO

TABLA Nº 7.14

LOSAS RETICULARES – RETICULO DE 6 x 6
COEFICIENTES DE FUERZA CORTANTE

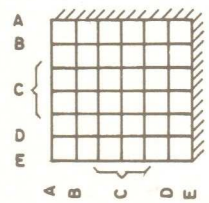
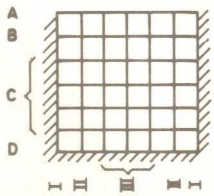
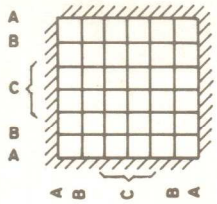
CASO	NERV.	ν = V/P					
		1-2	2-3	3-4	4-5	5-6	6-7
① 	A	4.37	0.90	0.20	-0.20	-0.90	-4.37
	B	2.98	2.48	0.68	-0.68	-2.48	-2.98
	C	0.18	1.17	1.65	-1.65	-1.17	-0.18
② 	A	2.72	0.46	0.20	-0.20	-0.46	-2.72
	B	4.21	1.71	0.41	-0.41	-1.71	-4.21
	C	1.55	1.72	0.48	-0.48	-1.72	-1.55
	D	2.26	1.93	0.59	-0.59	-1.93	-2.26
	I	8.89	4.18	2.12	0.78	-0.27	-3.04
	II	1.76	3.25	2.09	0.67	-1.16	-1.83
	III	-0.23	-0.08	0.32	-0.02	-0.25	-0.08
③ 	A	2.20	0.41	0.15	-0.15	-0.41	-2.20
	B	3.35	1.58	0.42	-0.42	-1.58	-3.35
	C	1.36	1.71	0.57	-0.57	-1.71	-1.36
	I	6.54	2.68	0.82	-0.82	-2.68	-6.54
	II	1.28	2.06	0.71	-0.71	-2.06	-1.28
	III	-0.23	-0.06	-0.07	+0.07	+0.06	+0.23

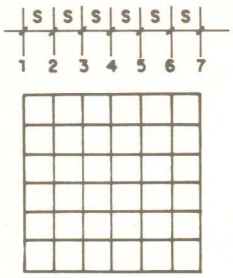


NERVIO TIPICO

TABLA Nº 7.14

LOSAS RETICULARES - RETICULO DE 6 x 6
COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P					
		1-2	2-3	3-4	4-5	5-6	6-7
 ④	A	1.97	0.04	-0.42	-1.30	-2.36	-7.46
	B	2.83	0.78	-0.77	-2.13	-4.10	-4.60
	C	0.88	0.81	-0.26	-1.02	-1.52	-0.55
	D	1.35	0.85	-0.45	-1.54	-2.47	-1.42
	E	2.00	0.149	-0.52	-1.34	-2.72	-6.05
 ⑤	A	5.44	1.45	0.52	-0.52	-1.45	-5.44
	B	3.54	2.71	0.78	-0.78	-2.71	-3.54
	C	0.43	1.00	0.35	-0.35	-1.00	-0.43
	D	4.54	1.82	0.54	-0.54	-1.82	-4.54
	I	5.98	1.94	1.00	0.34	-0.07	-1.53
	II	3.49	3.32	1.75	0.59	-0.67	-2.21
	III	0.43	1.35	1.00	0.21	-0.76	-0.78
 ⑥	A	4.37	1.22	0.40	-0.40	-1.22	-4.37
	B	2.65	2.15	0.64	-0.64	-2.15	-2.65
	C	0.32	0.83	0.33	-0.33	-0.83	-0.32

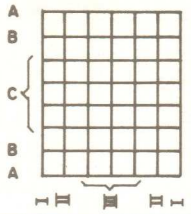
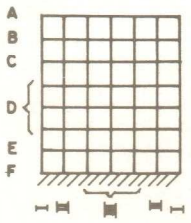
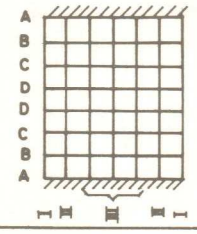


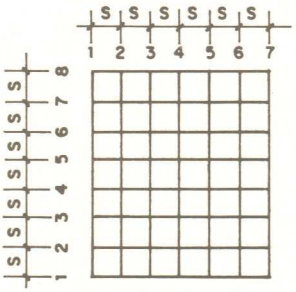
NERVIO TIPICO

LOSAS RETICULARES - RETICULO DE 6 x 7

TABLA Nº 7.15

COEFICIENTES DE MOMENTOS

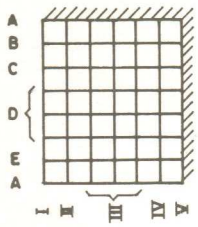
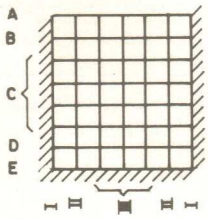
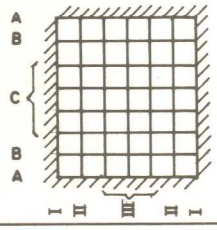
CASO	NERV.	μ = M/P.s							
		1	2	3	4	5	6	7	8
① 	A	0.0	5.25	6.45	6.76	6.45	5.25	0.0	-
	B	0.0	3.60	6.71	7.61	6.71	3.60	0.0	-
	C	0.0	0.19	1.28	1.32	1.28	0.19	0.0	-
	I	0.0	4.97	5.85	6.03	6.03	5.85	4.97	0.0
	II	0.0	3.54	6.58	7.74	7.74	6.58	3.54	0.0
	III	0.0	0.39	1.99	3.14	3.14	1.99	0.39	0.0
② 	A	0.0	3.17	3.69	3.96	3.69	3.17	0.0	-
	B	0.0	4.90	6.92	7.41	6.92	4.90	0.0	-
	C	0.0	1.79	3.76	4.27	3.76	1.79	0.0	-
	D	0.0	0.86	2.02	2.54	2.02	0.86	0.0	-
	E	0.0	2.53	4.69	5.32	4.69	2.53	0.0	-
	F	0.0	3.44	4.12	4.26	4.12	3.44	0.0	-
	I	-15.62	-5.28	-0.34	2.29	3.58	3.99	3.51	0.0
	II	-6.81	-4.65	-0.62	2.22	3.77	3.91	2.26	0.0
	III	-0.41	-0.66	-0.36	0.39	0.80	0.60	0.04	0.0
③ 	A	0.0	2.48	2.93	3.12	2.93	2.48	0.0	-
	B	0.0	3.81	5.48	5.90	5.48	3.81	0.0	-
	C	0.0	1.46	3.19	3.72	3.19	1.46	0.0	-
	D	0.0	0.98	2.37	2.99	2.37	0.98	0.0	-
	I	-10.6	-2.81	0.63	2.11	2.11	0.63	-2.81	-10.6
	II	-3.75	-2.22	0.44	1.86	1.86	0.44	-2.22	-3.75
	III	0.35	0.22	-0.07	-0.31	-0.31	-0.07	0.22	0.35

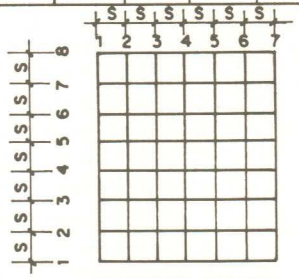


NERVIO TIPICO

TABLA Nº 7.15

LOSAS RETICULARES - RETICULO DE 6 x 7
COEFICIENTES DE MOMENTOS

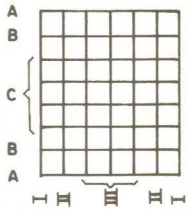
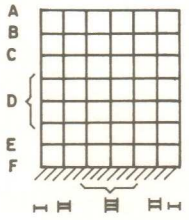
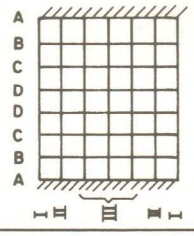
CASO	NERV.	μ = M/P.s							
		1	2	3	4	5	6	7	8
4 	A	0.0	2.43	2.64	2.01	0.33	-3.01	-10.8	-
	B	0.0	3.31	4.25	3.32	0.81	-3.96	-9.44	-
	C	0.0	1.04	2.08	1.76	0.53	-1.33	-2.03	-
	D	0.0	0.36	0.79	0.82	0.30	-0.54	-0.98	-
	E	0.0	1.56	2.55	2.00	0.22	-2.56	-4.10	-
	I	0.0	2.33	2.59	2.23	1.48	- .18	-3.40	-10.4
	II	0.0	1.73	3.03	3.01	1.84	-0.41	-3.66	-5.53
	III	0.0	1.16	2.34	2.34	1.51	0.0	-1.35	-2.43
	IV	0.0	3.38	4.52	4.20	2.75	-0.09	-5.11	-10.4
	V	0.0	2.25	2.47	2.32	1.54	- .18	-3.11	-12.0
5 	A	-7.0	-0.9	0.63	1.22	0.63	-0.9	-7.0	-
	B	-6.02	-1.78	1.34	2.22	1.34	-1.78	-6.02	-
	C	-1.22	-0.63	0.68	1.12	0.68	-0.63	-1.22	-
	D	-2.21	-1.11	0.61	1.21	0.61	-1.11	-2.21	-
	E	-6.75	-1.39	0.78	1.44	0.78	-1.39	-6.75	-
	I	-9.80	-2.59	-0.11	1.26	1.89	2.02	1.80	0.0
	II	-8.39	-4.32	-0.13	2.32	3.55	3.73	2.68	0.0
	III	-2.19	-1.76	-0.08	1.45	2.29	2.18	1.02	0.0
6 	A	-5.75	-0.79	0.54	1.01	0.54	-0.79	-5.75	-
	B	-4.58	-1.42	1.03	1.75	1.03	-1.42	-4.58	-
	C	-0.86	-0.47	0.48	0.84	0.48	-0.47	-0.86	-
	I	-6.57	-1.28	0.34	1.08	1.08	0.34	-1.28	-6.57
	II	-5.27	-2.15	0.65	1.91	1.91	0.65	-2.15	-5.27
	III	-1.16	-0.79	0.33	1.04	1.04	0.33	-0.79	-1.16

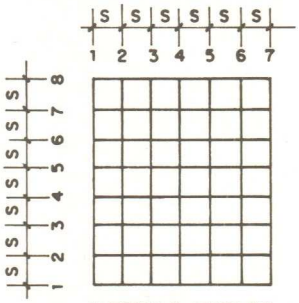


NERVIO TIPICO

TABLA Nº 7.16

LOSAS RETICULARES - RETICULO DE 6 x 7
COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P						
		1-2	2-3	3-4	4-5	5-6	6-7	7-8
① 	A	5.25	1.20	0.31	-0.31	-1.20	-5.25	-
	B	3.59	3.11	0.89	-0.89	-3.11	-3.59	-
	C	0.19	1.08	0.54	-0.54	-1.08	-0.19	-
	I	4.97	0.87	0.18	0.00	-0.18	-0.87	-4.97
	II	3.54	3.03	1.15	0.00	-1.15	-3.03	-3.54
	III	0.39	1.61	1.14	0.00	-1.14	-1.61	-0.39
② 	A	3.17	0.52	0.27	-0.27	-0.52	-3.17	-
	B	4.90	2.02	0.48	-0.48	-2.02	-4.90	-
	C	1.79	1.97	0.51	-0.51	-1.97	-1.79	-
	D	0.86	1.16	0.51	-0.51	-1.16	-0.36	-
	E	2.54	2.15	0.63	-0.63	-2.15	-2.54	-
	F	3.44	0.68	0.14	-0.14	-0.68	3.44	-
	I	10.33	4.93	2.64	1.28	0.41	-0.47	-3.51
	II	2.15	4.03	2.84	1.55	0.15	-1.65	-2.26
	III	-0.25	+0.29	0.76	0.41	-0.20	-0.56	-0.04
③ 	A	2.48	0.45	0.18	-0.18	-0.45	-2.48	-
	B	3.81	1.67	0.42	-0.42	-1.67	-3.81	-
	C	1.46	1.72	0.52	-0.52	-1.72	-1.46	-
	D	0.98	1.39	0.62	-0.62	-1.39	-0.98	-
	I	7.76	3.44	1.48	0.00	-1.48	-3.44	-7.76
	II	1.53	2.67	1.41	0.00	-1.41	-2.67	-1.53
	III	0.23	0.02	0.22	0.00	-0.22	-0.02	-0.23

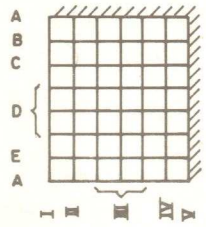
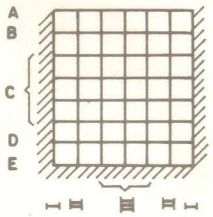
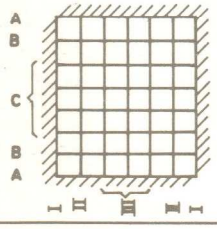


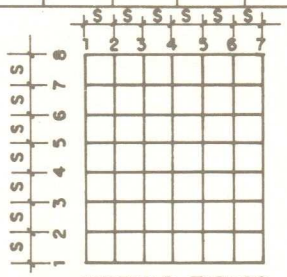
NERVIO TIPICO

TABLA Nº 7.16

LOSAS RETICULARES - RETICULO DE 6 x 7

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P						
		1-2	2-3	3-4	4-5	5-6	6-7	7-8
④ 	A	2.43	0.21	-0.63	-1.68	-3.34	-8.45	-
	B	3.31	0.93	-0.93	-2.50	-4.78	-5.47	-
	C	1.04	1.04	-0.32	-1.23	-1.87	-0.70	-
	D	0.36	0.43	0.02	-0.51	-0.84	-0.44	-
	E	1.56	0.99	-0.55	-1.78	-2.87	-1.54	-
	I	-2.33	-0.26	0.31	0.81	1.66	3.21	7.03
	II	-1.72	-1.31	0.00	1.18	2.25	3.25	1.87
	III	-1.16	-1.17	0.00	0.83	1.51	1.86	0.58
	IV	-3.38	-1.13	0.31	1.45	2.85	5.02	5.33
	V	-2.25	-0.21	0.14	0.78	1.72	2.92	8.89
⑤ 	A	6.10	1.53	0.60	-0.60	-1.53	-6.10	-
	B	4.24	3.12	0.89	-0.89	-3.12	-4.24	-
	C	0.59	1.32	0.44	-0.44	-1.32	-0.59	-
	D	1.09	1.73	0.59	-0.59	-1.73	-1.09	-
	E	5.36	2.18	0.65	-0.65	-2.18	-5.36	-
	I	7.21	2.47	1.38	0.62	0.13	-0.21	-1.80
	II	4.07	4.18	2.46	1.22	0.18	-1.05	-2.68
	III	0.43	1.67	1.54	0.83	-0.11	-1.15	-1.02
⑥ 	A	4.96	1.34	0.46	-0.46	-1.34	-4.96	-
	B	3.15	2.46	0.72	-0.72	-2.46	-3.15	-
	C	0.39	0.95	0.35	-0.35	-0.95	-0.39	-
	I	5.28	1.63	0.74	0.00	-0.74	-1.63	-5.28
	II	3.12	2.81	1.25	0.00	-1.25	-2.81	-3.12
	III	0.37	1.12	0.71	0.00	-0.71	-1.12	-0.37

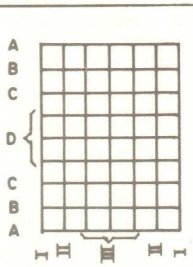
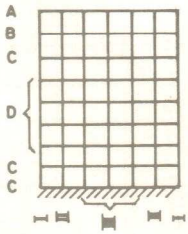
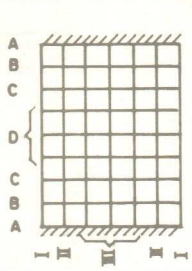


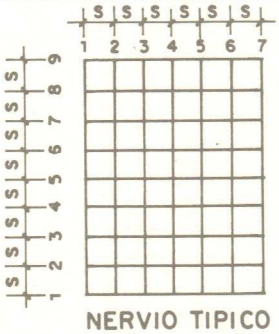
NERVIO TIPICO

TABLA Nº 7. 17

LOSAS RETICULARES – RETICULO DE 6 x 8

COEFICIENTES DE MOMENTOS

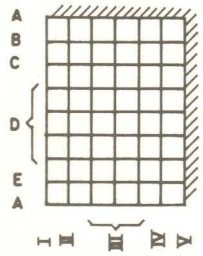
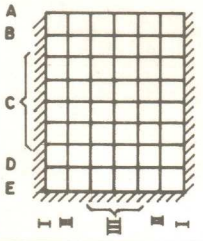
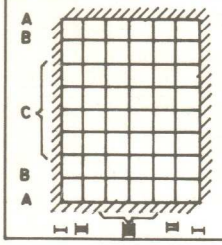
CASO	NERV.	μ = M/P.s								
		1	2	3	4	5	6	7	8	9
① 	A	0.0	6.07	7.52	7.91	7.52	6.07	0.0	-	-
	B	0.0	4.25	7.99	9.10	7.99	4.25	0.0	-	-
	C	0.0	0.31	1.65	2.33	1.65	0.31	0.0	-	-
	D	0.0	-0.58	-1.27	-1.60	+1.27	+0.58	0.0	-	-
	I	0.0	5.63	6.51	6.59	6.54	6.59	6.51	5.63	0.0
	II	0.0	4.11	7.74	9.32	9.76	9.32	7.74	4.11	0.0
	III	0.0	0.56	2.75	4.62	5.30	4.62	2.75	0.56	0.0
② 	A	0.0	3.65	4.19	4.52	4.19	3.65	0.0	-	-
	B	0.0	5.61	7.98	8.54	7.98	5.61	0.0	-	-
	C	0.0	2.92	5.43	6.17	5.43	2.92	0.0	-	-
	D	0.0	0.96	2.24	2.82	2.24	0.96	0.0	-	-
	I	-18.46	-6.74	-1.14	1.91	3.49	4.30	4.54	3.98	0.0
	II	-9.16	-6.54	-1.68	1.86	4.11	5.10	4.81	2.70	0.0
	III	-1.07	-1.37	-0.85	0.41	1.39	1.69	1.14	0.18	0.0
③ 	A	0.0	2.80	3.30	3.52	3.30	2.80	0.0	-	-
	B	0.0	4.32	6.17	6.62	6.17	4.32	0.0	-	-
	C	0.0	1.62	3.46	3.98	3.46	1.62	0.0	-	-
	D	0.0	0.91	2.18	2.74	2.18	0.91	0.0	-	-
	I	-12.98	-3.95	0.15	2.14	2.72	2.14	0.15	-3.95	-12.98
	II	-5.12	-3.31	-0.03	2.02	2.72	2.02	-0.03	-3.31	-5.12
	III	-0.11	-0.33	-0.17	0.31	0.51	0.31	-0.17	-0.33	-0.11

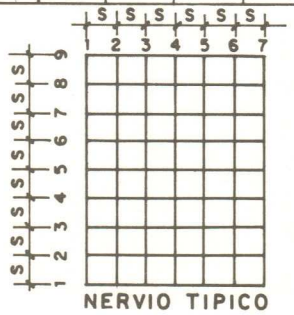


NERVIO TIPICO

TABLA Nº 7.17

LOSAS RETICULARES - RETICULO DE 6 x 8
COEFICIENTES DE MOMENTOS

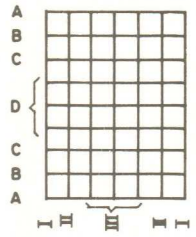
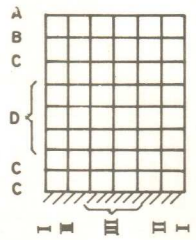
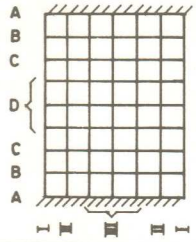
CASO	NERV.	μ = M/P.s								
		1	2	3	4	5	6	7	8	9
	A	0.0	2.71	2.56	2.00	0.25	-2.56	-11.92	-	-
	B	0.0	3.78	4.86	3.77	0.94	-4.48	-10.36	-	-
	C	0.0	1.22	2.51	2.14	0.68	-1.59	-2.47	-	-
	D	0.0	0.48	1.06	1.09	0.39	-0.67	-1.22	-	-
	E	0.0	1.82	2.98	2.33	0.25	-2.96	-4.71	-	-
	I	0.0	2.67	3.03	2.83	2.31	1.27	-0.73	-9.46	-12.47
	II	0.0	2.10	3.86	4.28	3.54	1.65	-1.33	-5.39	-7.74
	III	0.0	1.43	3.00	3.33	2.74	1.38	-0.61	-2.78	-3.35
	IV	0.0	3.94	5.41	5.45	4.53	2.47	-1.10	-7.10	-13.14
	V	0.0	2.58	2.90	2.92	2.46	1.37	-0.76	-4.27	-14.66
	A	-7.59	-0.91	0.64	1.31	0.64	-0.91	-7.59	-	-
	B	-6.93	-1.97	1.52	2.48	1.52	-1.97	-6.93	-	-
	C	-1.54	-0.78	0.86	1.38	0.86	-0.78	-1.54	-	-
	D	-2.55	-1.29	0.71	1.41	0.71	-1.29	-2.55	-	-
	E	-7.78	-1.61	0.91	1.66	0.91	-1.61	-7.78	-	-
	I	-12.18	-3.67	-0.62	1.16	2.09	2.47	2.44	2.11	0.0
	II	-10.81	-6.17	-1.08	2.12	4.00	4.78	4.59	3.16	0.0
	III	-3.18	-2.35	-0.61	1.19	2.62	3.11	2.43	1.02	0.0
	A	-6.35	-0.84	0.58	1.11	0.58	-0.84	-6.35	-	-
	B	-5.29	-1.60	1.18	1.98	1.18	-1.60	-5.29	-	-
	C	-1.04	-0.55	0.58	0.98	0.58	-0.55	-1.04	-	-
	I	-8.18	-1.94	0.10	1.15	1.46	1.15	0.10	-1.94	-8.18
	II	-6.83	-3.25	0.23	2.07	2.66	2.07	0.23	-3.25	-6.83
	III	-1.68	-1.28	0.09	1.22	1.62	1.22	0.09	-1.28	-1.68

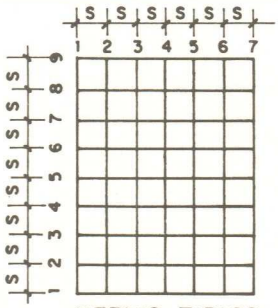


NERVIO TIPICO

TABLA Nº 7. 18

LOSAS RETICULARES - RETICULO DE 6 x 8
COEFICIENTES DE FUERZA CORTANTE

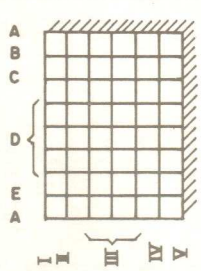
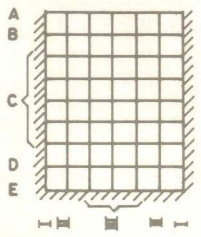
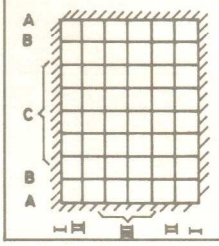
CASO	NERV.	ν = V/P							
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
① 	A	6.06	1.45	0.39	-0.39	-1.45	-6.06	-	-
	B	4.25	3.74	1.10	-1.10	-3.74	-4.25	-	-
	C	0.31	1.35	0.68	-0.68	-1.35	-0.31	-	-
	D	-0.58	-0.69	-0.33	+0.33	+0.69	+0.58	-	-
	I	5.63	0.88	0.07	-0.04	+0.04	-0.07	-0.88	-5.63
	II	4.11	3.62	1.58	0.44	-0.44	-1.58	-3.62	-4.11
	III	0.56	2.19	1.87	0.67	-0.67	-1.87	-2.19	-0.56
② 	A	3.66	0.53	0.33	-0.33	-0.53	-3.66	-	-
	B	5.61	2.37	0.56	-0.56	-2.37	-5.61	-	-
	C	2.05	2.35	0.60	-0.60	-2.35	-2.05	-	-
	D	0.96	1.28	0.57	-0.57	-1.28	-0.96	-	-
	I	11.71	5.61	3.05	1.58	0.81	0.24	-0.56	-3.98
	II	2.62	4.85	3.55	2.24	0.99	-0.29	-2.10	-2.70
	III	-0.29	0.51	1.27	0.98	0.29	-0.55	-0.96	-0.18
③ 	A	2.80	0.49	0.22	-0.22	-0.49	-2.80	-	-
	B	4.23	1.84	0.45	-0.45	-1.84	-4.23	-	-
	C	1.62	1.84	0.52	-0.52	-1.84	-1.62	-	-
	D	0.91	1.27	0.56	-0.56	-1.27	-0.91	-	-
	I	8.93	4.11	1.99	0.57	-0.57	-1.99	-4.11	-8.93
	II	1.81	3.28	2.06	0.70	-0.70	-2.06	-3.28	-1.81
	III	-0.23	0.16	0.48	0.19	-0.19	-0.48	-0.16	0.23

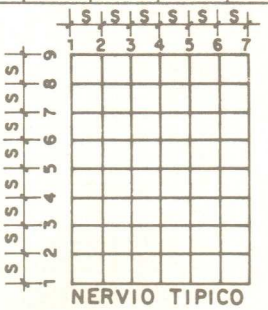


NERVIO TIPICO

TABLA Nº 7.18

LOSAS RETICULARES - RETICULO DE 6 x 8
COEFICIENTES DE FUERZA CORTANTE

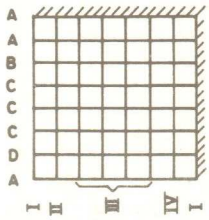
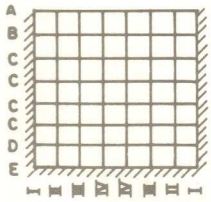
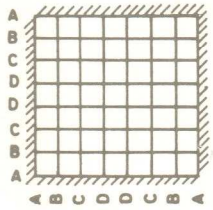
CASO	NERV.	ν = V/P							
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
	A	2.70	-0.14	-0.56	-1.74	-2.81	-9.36	-	-
	B	3.78	1.07	-1.08	-2.83	-5.43	-6.37	-	-
	C	1.22	1.30	-0.37	-1.45	-2.28	-0.87	-	-
	D	0.48	0.57	0.03	0.70	-1.06	-0.54	-	-
	E	1.82	1.16	-0.65	-2.08	-3.21	-1.75	-	-
	I	-2.67	-0.35	0.19	0.53	1.03	2.01	3.72	8.01
	II	-2.09	-1.76	-0.42	0.74	1.89	2.98	4.06	2.35
	III	-1.43	-1.57	-0.32	0.58	1.36	1.99	2.16	0.56
	IV	-3.93	-1.47	-0.04	0.92	2.06	3.58	5.98	6.04
	V	-2.57	-0.32	-0.02	0.45	1.09	2.13	3.51	10.38
	A	6.68	1.55	0.66	-0.66	-1.55	-6.68	-	-
	B	4.95	3.50	0.95	-0.95	-3.50	-4.95	-	-
	C	0.76	1.63	0.52	-0.52	-1.63	-0.76	-	-
	D	1.26	2.00	0.69	-0.69	-2.00	-1.26	-	-
	E	6.17	2.51	0.76	-0.76	-2.51	-6.17	-	-
	I	8.51	3.05	1.79	0.92	0.38	-0.02	-0.34	-2.10
	II	4.63	5.08	3.21	1.87	0.78	-0.19	-1.42	-3.16
	III	0.82	1.74	1.80	1.43	0.49	-0.68	-1.40	-1.02
	A	5.51	1.42	0.53	-0.53	-1.42	-5.51	-	-
	B	3.69	2.78	0.80	-0.80	-2.78	-3.69	-	-
	C	0.49	1.13	0.40	-0.40	-1.13	-0.49	-	-
	I	6.23	2.04	1.05	0.31	-0.31	-1.05	-2.04	-6.23
	II	3.58	3.48	1.84	0.58	-0.58	-1.84	-3.48	-3.58
	III	0.56	1.15	0.96	0.38	-0.38	-0.96	-1.15	-0.56

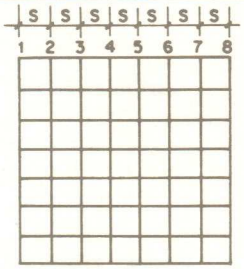


NERVIO TIPICO

TABLA Nº 7.19

LOSAS RETICULARES - RETICULO DE 7 x 7
COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P						
		1-2	2-3	3-4	4-5	5-6	6-7	7-8
④ 	A	4.09	2.06	-0.02	-1.34	-3.03	-6.08	-6.58
	B	1.07	1.52	0.42	-0.83	-2.06	-2.56	-0.52
	C	0.28	0.73	0.31	-0.51	-1.00	-0.77	-0.091
	D	2.29	1.79	0.28	-1.09	-2.55	-4.00	-2.97
	I	-4.10	-2.06	0.02	1.35	3.04	6.08	7.70
	II	-2.29	-1.78	-0.27	1.09	2.55	4.00	2.96
	III	-0.30	-0.80	-0.29	-0.48	1.06	0.97	-0.11
	IV	-1.07	-1.52	-0.42	0.84	2.07	2.57	0.52
⑤ 	A	7.50	1.71	1.60	2.33	-1.60	-1.71	-7.50
	B	5.18	4.57	1.83	0.0	-1.83	-4.57	-5.18
	C	0.33	1.79	1.20	0.0	-1.20	-1.79	-0.33
	D	2.28	2.89	1.48	0.0	-1.48	-2.89	-2.28
	E	6.16	2.38	0.94	0.0	-0.94	-2.38	-6.16
	I	7.53	1.84	1.01	0.55	0.22	-0.08	-2.86
	II	5.28	4.90	2.43	1.08	0.02	-1.66	-3.28
	III	0.48	2.22	1.81	0.75	-0.37	-1.34	-0.93
	IV	0.23	1.06	1.26	0.63	-0.36	-0.91	-0.44
⑥ 	A	6.00	1.35	0.56	0.0	-0.56	-1.35	-6.00
	B	4.15	3.65	1.43	0.0	-1.43	-3.65	-4.15
	C	0.29	1.50	1.00	0.0	-1.00	-1.50	-0.29
	D	0.067	0.50	0.50	0.0	-0.50	-0.50	-0.067

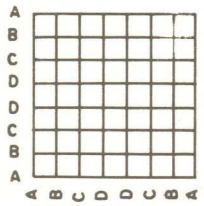
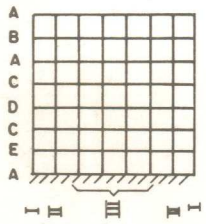
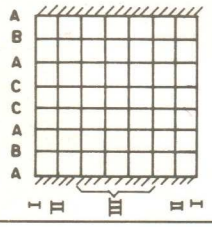


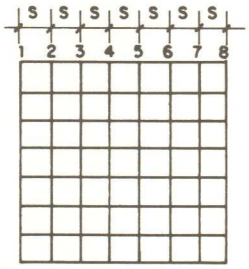
NERVIO TIPICO

TABLA Nº 7.19

LOSAS RETICULARES - RETICULO DE 7 x 7

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P						
		1-2	2-3	3-4	4-5	5-6	6-7	7-8
	A	6.03	1.37	0.35	0.0	-0.35	-1.37	-6.03
	B	4.16	3.66	1.61	0.0	-1.61	-3.66	-4.16
	C	0.52	1.55	1.06	0.0	-1.06	-1.55	-0.52
	D	-0.15	0.46	0.51	0.0	-0.51	-0.46	+0.15
	A	4.77	5.32	5.48	0.0	-5.48	-5.32	-4.77
	B	5.50	3.14	0.91	0.0	-0.91	-3.14	-5.50
	C	0.63	+1.56	+1.17	0.0	-1.17	-1.56	-0.63
	D	0.36	1.19	0.98	0.0	-0.98	-1.19	-0.36
	E	3.20	2.88	1.29	0.0	-1.29	-2.88	-3.20
	I	10.31	4.31	2.24	1.11	0.25	-0.89	-4.60
	II	3.94	5.31	3.41	1.47	-0.37	-2.37	-3.07
	III	-0.27	0.94	1.09	0.47	-0.32	-0.81	-0.22
	A	3.84	0.30	0.11	0.0	-0.11	-0.30	-3.84
	B	4.48	2.66	0.82	0.0	-0.82	-2.66	-4.48
	C	0.81	1.82	1.35	0.0	-1.35	-1.82	-0.81
	I	8.21	3.22	1.31	0.0	-1.31	-3.22	-8.21
	II	3.05	3.87	2.01	0.0	-2.01	-3.87	-3.05
	III	-0.39	-0.58	-0.33	0.0	+0.33	+0.58	+0.39

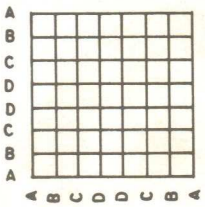
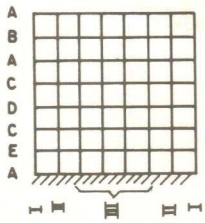
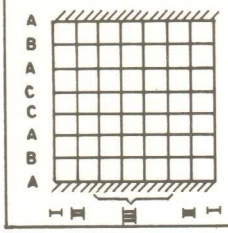


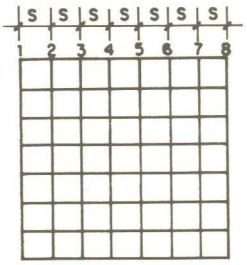
NERVIO TIPICO

TABLA Nº 7.20

LOSAS RETICULARES - RETICULO DE 7 x 7

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s							
		1	2	3	4	5	6	7	8
① 	A	0.0	6.04	7.40	7.75	7.75	7.40	6.04	0.0
	B	0.0	4.16	7.82	9.44	9.44	7.82	4.16	0.0
	C	0.0	0.52	2.08	3.13	3.13	2.08	0.52	0.0
	D	0.0	-0.15	0.31	0.81	0.81	0.31	-0.15	0.0
② 	A	0.0	4.77	5.20	5.34	5.34	5.20	4.77	0.0
	B	0.0	5.51	8.64	9.56	9.56	8.64	5.51	0.0
	C	0.0	0.63	2.20	3.37	3.37	2.20	0.63	0.0
	D	0.0	0.36	1.55	2.54	2.54	1.55	0.36	0.0
	E	0.0	3.20	6.09	7.38	7.38	6.09	3.20	0.0
	I	-1275	-2.43	1.87	4.12	5.23	5.48	4.59	0.0
	II	-8.31	-4.36	0.94	4.35	5.81	5.44	3.07	0.0
	III	-0.87	-1.15	-0.21	0.88	1.36	1.04	0.23	0.0
③ 	A	0.0	3.84	4.14	4.91	4.91	4.14	3.84	0.0
	B	0.0	4.48	7.14	7.96	7.96	7.14	4.48	0.0
	C	0.0	0.81	2.62	3.97	3.97	2.62	0.81	0.0
	I	-9.24	-1.04	2.17	3.48	3.48	2.17	-1.04	-9.24
	II	-5.41	-2.36	1.51	3.53	3.53	1.51	-2.36	-5.41
	III	-0.20	-0.50	0.0	0.56	0.56	0.0	-0.50	-0.20

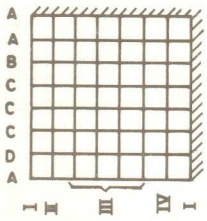
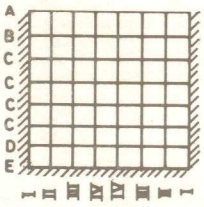
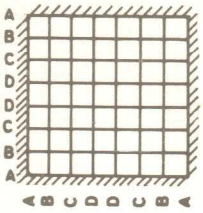


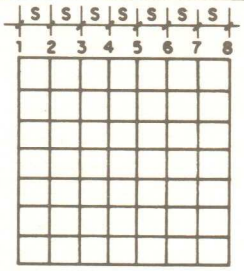
NERVIO TIPICO

TABLA Nº 7.20

LOSAS RETICULARES - RETICULO DE 7 x 7

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ M/P.s							
		1	2	3	4	5	6	7	8
④ 	A	0.0	4.09	6.15	6.12	4.78	1.75	-4.33	-10.91
	B	0.0	1.07	2.58	3.01	2.18	0.11	-2.45	-2.98
	C	0.0	0.28	1.02	1.32	0.82	-0.18	-0.96	-1.05
	D	0.0	2.29	4.08	4.36	3.27	0.72	-3.28	-6.25
	I	0.0	3.37	3.95	3.73	2.97	1.42	-1.69	-9.39
	II	0.0	2.29	4.08	4.36	3.26	0.71	-3.28	-6.25
	III	0.0	0.29	1.10	1.39	0.91	-0.16	-1.13	-1.03
	IV	0.0	1.07	2.59	3.01	2.18	0.11	-2.46	-2.98
⑤ 	A	-7.61	-0.12	1.60	2.33	2.33	1.60	-0.12	-7.61
	B	-7.57	-2.39	2.18	4.00	4.00	2.18	-2.39	-7.57
	C	-1.65	-1.32	0.47	1.67	1.67	0.47	-1.32	-1.65
	D	-4.03	-1.75	1.14	2.62	2.62	1.14	-1.75	-4.03
	E	-6.09	-0.74	1.63	2.57	2.57	1.63	-0.74	-6.09
	I	-8.21	-0.63	1.16	2.17	2.72	2.94	2.86	0.0
	II	-8.77	-3.49	1.41	3.85	4.93	4.95	3.28	0.0
	III	-2.62	-2.13	0.09	1.91	2.65	2.28	0.94	0.0
	IV	-1.46	-1.22	-0.17	1.09	1.72	1.36	0.44	0.0
⑥ 	A	-6.08	-0.08	1.27	1.84	1.84	+1.27	-0.08	-6.08
	B	-6.05	-1.90	1.74	3.18	3.18	1.74	-1.90	-6.05
	C	-1.39	-1.10	0.40	1.41	1.41	0.40	-1.10	-1.39
	D	-0.49	-0.42	0.08	0.58	0.58	0.08	-0.42	-0.49

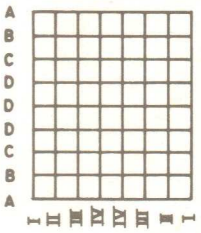
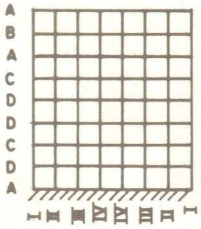


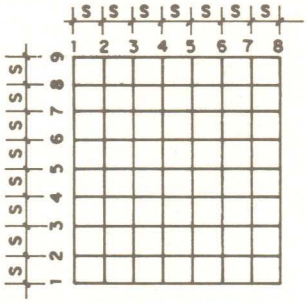
NERVIO TIPICO

TABLA Nº 7.21

LOSAS RETICULARES - RETICULO DE 7 x 8

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s								
		1	2	3	4	5	6	7	8	9
① 	A	0.0	7.12	8.92	9.47	9.47	8.92	7.12	0.0	-
	B	0.0	4.98	9.48	11.54	11.54	9.48	4.98	0.0	-
	C	0.0	0.63	2.46	3.69	3.69	2.46	0.63	0.0	-
	D	0.0	-0.26	-0.02	0.29	0.29	-0.02	-0.26	0.0	-
	I	0.0	6.83	8.23	8.51	8.55	8.51	8.23	+6.83	0.0
	II	0.0	4.78	9.07	11.16	11.75	11.16	9.07	4.78	0.0
	III	0.0	0.73	2.88	4.60	5.21	4.60	2.88	0.73	0.0
	IV	0.0	0.04	1.12	2.41	2.98	2.41	1.12	0.04	0.0
② 	A	0.0	5.53	5.99	6.17	6.17	5.99	5.53	0.0	-
	B	0.0	6.39	10.11	11.27	11.27	10.11	6.39	0.0	-
	C	0.0	0.65	2.23	3.37	3.37	2.23	0.65	0.0	
	D	0.0	0.22	0.97	1.57	1.57	0.97	0.22	0.0	
	I	-15.43	-3.62	1.29	3.90	5.35	6.09	6.19	5.18	0.0
	II	-10.86	-6.30	-0.05	4.17	6.48	7.25	6.39	3.52	0.0
	III	-1.82	-2.04	-0.69	0.97	2.05	2.26	1.56	0.38	0.0
	IV	0.02	-0.23	-0.45	-0.13	0.34	0.40	0.07	-0.21	0.0

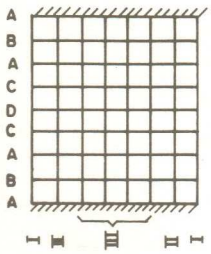
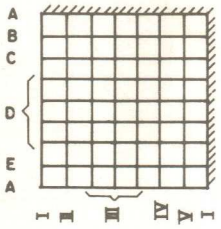


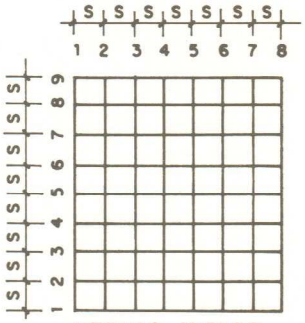
NERVIO TIPICO

TABLA Nº 7.21

LOSAS RETICULARES - RETICULO DE 7 x 8

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s								
		1	2	3	4	5	6	7	8	9
③ 	A	0.0	4.40	5.22	5.21	5.21	5.22	4.40	0.0	-
	B	0.0	5.11	8.11	9.03	9.03	8.11	5.11	0.0	-
	C	0.0	0.74	2.38	3.56	3.56	2.38	0.74	0.0	-
	D	0.0	0.56	1.87	2.87	2.87	1.87	0.56	0.0	-
	I	-11.35	-1.93	-1.87	3.64	4.18	3.65	1.88	-1.93	-11.37
	II	-7.18	-3.63	1.03	3.82	4.70	3.82	1.03	-3.63	-7.18
	III	-0.64	-0.92	-0.12	0.77	1.12	0.77	-0.12	-0.92	-0.64
④ 	A	0.0	4.15	4.70	4.47	3.53	1.64	-2.08	-11.88	-
	B	0.0	4.77	7.24	7.24	5.62	1.99	-5.11	-12.70	-
	C	0.0	1.27	3.06	3.58	2.58	+0.12	-2.89	-3.52	-
	D	0.0	0.32	1.10	1.43	0.92	-0.17	-1.05	-1.16	-
	E	0.0	2.67	4.80	5.15	3.84	0.82	-3.86	-7.29	-
	I	0.0	4.09	4.43	4.27	3.75	2.31	1.08	-2.49	-12.38
	II	0.0	2.68	4.91	5.59	5.00	3.21	-0.05	-4.83	-8.31
	III	0.0	0.48	1.71	2.43	2.20	1.05	-0.70	-2.08	-2.13
	IV	0.0	1.29	3.22	4.03	3.64	2.16	-0.53	-3.67	-4.33
	V	0.0	4.68	7.13	7.38	6.52	4.61	0.93	-6.14	-13.72

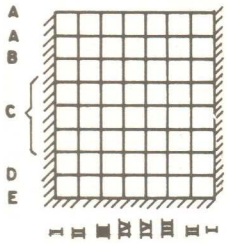
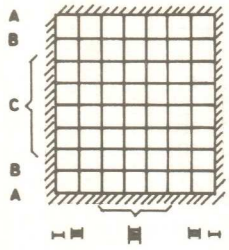


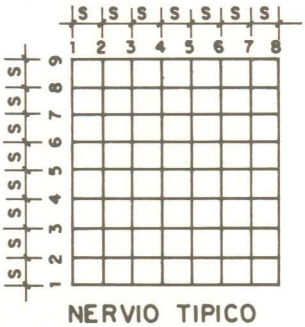
NERVIO TIPICO

TABLA Nº 7.21

LOSAS RETICULARES - RETICULO DE 7 x 8

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s								
		1	2	3	4	5	6	7	8	9
	A	-8.76	-2.79	2.51	4.66	4.66	2.51	-2.79	-8.76	-
	B	-2.00	-1.58	0.56	2.03	2.03	0.56	-1.58	-2.00	-
	C	0.43	-0.39	0.05	0.54	0.54	0.05	-0.39	0.43	-
	D	-4.72	-2.07	1.33	3.10	3.10	1.33	-2.07	-4.72	-
	E	-7.96	-0.88	1.87	2.99	2.99	1.87	-0.88	-7.96	-
	I	-9.96	-1.30	0.86	2.12	2.88	3.27	3.42	3.29	0.0
	II	-11.20	-5.07	0.72	3.78	5.40	6.10	5.85	3.80	0.0
	III	-3.91	-3.29	-0.52	1.93	3.33	3.69	2.91	1.15	0.0
	IV	-2.63	-2.27	-0.76	1.21	2.67	2.92	2.00	0.61	0.0
	A	-7.00	-0.11	1.47	2.14	2.14	1.47	-0.11	-7.00	-
	B	-7.00	-2.23	2.01	3.71	3.71	2.01	-2.23	-7.00	-
	C	-1.60	-1.27	0.45	1.61	1.61	0.45	-1.27	-1.60	-
	I	-7.71	-2.91	1.43	3.38	3.92	3.38	1.43	-2.91	-7.71
	II	-2.19	-1.78	0.15	1.65	2.14	1.65	0.15	-1.78	-2.19
	III	-1.16	-0.98	-0.10	0.94	1.41	0.94	-0.10	-0.98	-1.16

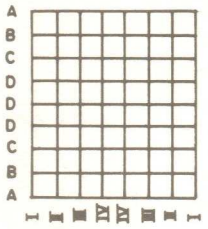
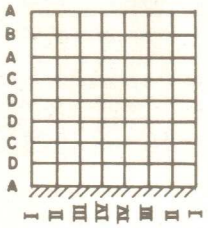


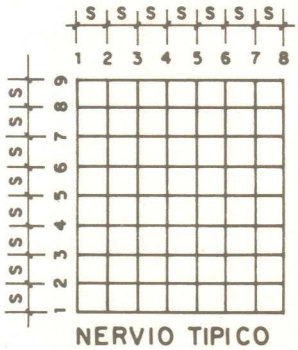
NERVIO TIPICO

TABLA Nº 7.22

LOSAS RETICULARES - RETICULO DE 7 x 8

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P							
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
① 	A	7.12	1.79	0.55	0.0	-0.55	-1.79	-7.12	-
	B	4.98	4.49	2.06	0.0	-2.06	-4.49	-4.98	-
	C	0.63	1.82	1.23	0.0	-1.23	-1.82	-0.63	-
	D	-0.26	0.23	0.31	0.0	-0.31	-0.23	+0.26	-
	I	6.83	1.40	0.28	0.04	-0.04	-0.23	-1.40	-6.83
	II	4.78	4.28	2.09	0.59	-0.59	-2.09	-4.28	-4.78
	III	0.74	2.14	1.71	0.61	-0.61	-1.71	-2.14	-0.74
	IV	0.04	1.07	1.29	0.58	-0.58	-1.29	-1.07	-0.04
② 	A	5.53	0.46	0.18	0.0	-0.13	-0.46	-5.53	-
	B	6.39	3.72	1.15	0.0	-1.15	-3.72	-6.39	-
	C	0.66	1.57	1.14	0.0	-1.14	-1.57	-0.66	-
	D	0.22	0.75	0.61	0.0	-0.61	-0.75	-0.22	-
	I	11.81	4.92	2.61	1.45	0.73	0.10	-1.00	-5.18
	II	4.57	6.23	4.23	2.31	0.77	-0.86	-2.86	-3.52
	III	-0.22	1.35	1.66	1.08	0.21	-0.69	-1.18	-0.38
	IV	-0.31	-0.16	0.32	0.47	0.06	-0.33	-0.27	0.20

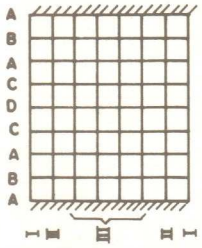
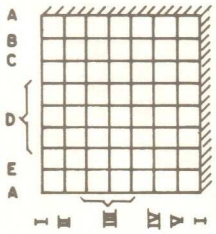


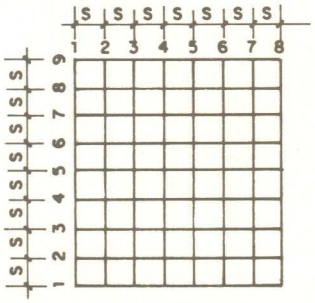
NERVIO TIPICO

TABLA Nº 7.22

LOSAS RETICULARES - RETICULO DE 7 x 8

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P							
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
③ 	A	4.4	0.35	0.13	0.0	-0.13	-0.35	-4.4	-
	B	5.11	3.00	0.91	0.0	-0.91	-3.00	-5.11	-
	C	0.74	1.64	1.18	0.0	-1.18	-1.64	-0.74	-
	D	0.56	1.31	1.00	0.0	-1.00	-1.31	-0.56	-
	I	9.41	3.30	1.77	0.53	-0.53	-1.77	-3.80	-9.41
	II	3.55	4.66	2.79	0.88	-0.88	-2.79	-4.66	-3.55
	III	-0.28	+0.79	0.90	0.35	-0.35	-0.90	-0.79	+0.28
④ 	A	4.15	0.76	-0.29	-0.94	-1.90	-3.70	-10.8	-
	B	4.77	2.46	0.0	-1.62	-3.63	-7.10	-7.60	-
	C	1.27	1.80	0.51	-1.00	-2.46	-3.02	-0.63	-
	D	0.32	0.78	0.33	-0.51	-1.08	-0.88	-0.11	-
	E	2.67	2.11	0.35	-1.30	-3.02	-4.67	-3.43	-
	I	-4.09	-0.62	0.18	0.51	0.94	1.76	3.53	10.78
	II	-2.67	-2.23	-0.68	0.60	1.79	3.26	4.78	3.47
	III	-0.48	-1.23	-0.79	0.22	1.25	1.71	1.43	0.21
	IV	-1.29	-1.93	-0.81	0.39	1.43	2.69	3.14	0.66
	V	-4.68	-2.44	-0.26	0.86	1.91	3.68	7.07	7.59

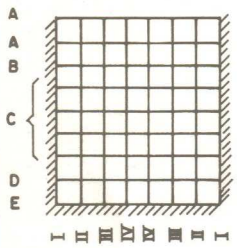
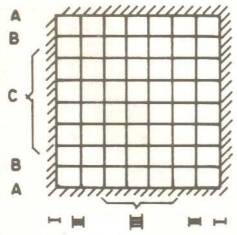


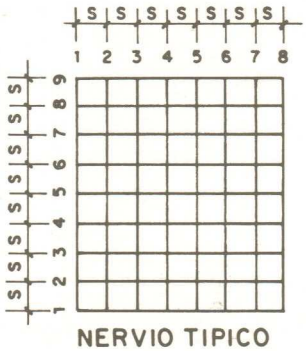
NERVIO TIPICO

TABLA Nº 7.22

LOSAS RETICULARES - RETICULO DE 7 x 8

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P							
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
⑤ 	A	5.97	5.30	2.15	0.0	-2.15	-5.30	-5.79	-
	B	0.42	2.14	1.47	0.0	-1.47	-2.14	-0.42	-
	C	0.0	0.44	0.48	0.0	-0.43	-0.44	0.0	-
	D	2.65	3.40	1.77	0.0	-1.77	-3.40	-2.65	-
	E	7.07	2.76	1.11	0.0	-1.11	-2.76	-7.07	-
	I	8.65	2.17	1.26	0.76	0.40	0.14	-0.14	-3.29
	II	6.11	5.79	3.06	1.61	0.71	-0.25	-2.05	-3.80
	III	0.63	2.77	2.45	1.40	0.36	-0.78	-1.76	-1.15
	IV	0.36	1.51	1.98	1.46	0.25	-0.92	-1.39	-0.61
⑥ 	A	6.88	1.58	0.67	0.0	-0.67	-1.58	-6.88	-
	B	4.77	4.23	1.70	0.0	-1.70	-4.23	-4.77	-
	C	0.33	1.72	1.16	0.0	-1.16	-1.72	-0.33	-
	I	4.80	4.34	1.95	0.54	-0.54	-1.95	-4.34	-4.80
	II	0.41	1.94	1.50	0.49	-0.49	-1.50	-1.94	-0.41
	III	0.17	0.88	1.04	0.47	-0.47	-1.04	-0.88	-0.17

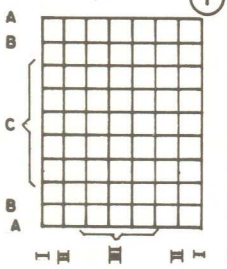
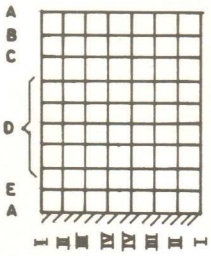


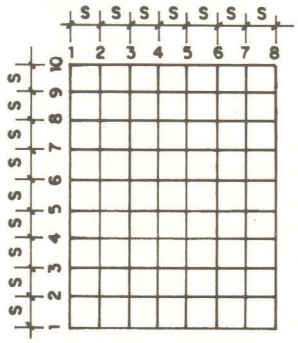
NERVIO TIPICO

TABLA Nº 7.23

LOSAS RETICULARES - RETICULO DE 7 x 9

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s									
		1	2	3	4	5	6	7	8	9	10
① 	A	0.0	8.07	10.20	10.90	10.90	10.20	8.07	0.0	-	-
	B	0.0	5.73	10.98	13.45	13.45	10.98	5.73	0.0	-	-
	C	0.0	0.78	2.96	4.44	4.44	2.96	0.78	0.0	-	-
	I	0.0	7.68	9.13	9.30	9.23	9.23	9.30	9.13	7.68	0.0
	II	0.0	5.44	10.38	12.90	13.87	13.87	12.90	10.38	5.44	0.0
	III	0.0	0.93	3.65	6.05	7.34	7.34	6.05	3.65	0.93	0.0
② 	A	0.0	6.29	7.44	7.87	7.87	7.44	6.29	0.0	-	-
	B	0.0	7.31	11.66	13.07	13.07	11.66	7.31	0.0	-	-
	C	0.0	2.10	5.36	7.12	7.12	5.36	2.10	0.0	-	-
	D	0.0	0.75	2.51	3.79	3.79	2.51	0.75	0.0	-	-
	E	0.0	4.30	8.09	9.87	9.87	8.09	4.30	0.0	-	-
	I	-18.20	-4.81	0.68	3.58	5.23	6.21	6.76	6.83	5.78	0.0
	II	-13.60	-8.43	-1.26	3.73	6.71	8.26	8.57	7.33	3.99	0.0
	III	-3.06	-3.23	-1.44	.82	2.56	3.42	3.27	2.14	.54	0.0
	IV	-.97	-1.20	-1.04	-.125	1.07	1.71	1.45	.62	-.06	0.0

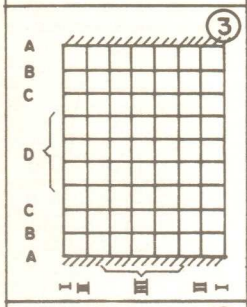
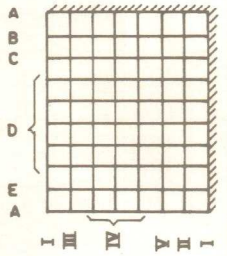


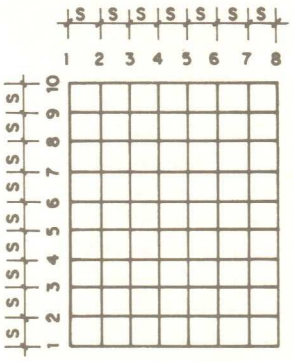
NERVIO TIPICO

TABLA Nº 7.23

LOSAS RETICULARES - RETICULO DE 7 x 9

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s									
		1	2	3	4	5	6	7	8	9	10
③ 	A	0.0	5.01	5.45	5.63	5.63	5.45	5.01	0.0	-	-
	B	0.0	5.82	9.27	10.36	10.36	9.27	5.82	0.0	-	-
	C	0.0	1.69	4.33	5.76	5.76	4.33	1.69	0.0	-	-
	D	0.0	0.71	2.32	3.48	3.48	2.32	0.71	0.0	-	-
	I	-13.44	-2.34	1.46	3.59	4.50	4.50	3.59	1.46	-2.84	-13.44
	II	-9.11	-5.06	.36	3.82	5.38	5.38	3.82	.36	-5.06	-9.11
	III	-1.28	-1.50	-.42	0.89	1.66	1.66	.89	-.42	-1.50	-1.28
④ 	A	0.0	4.71	5.38	5.15	4.05	1.85	-2.41	-13.45	-	-
	B	0.0	5.45	8.28	8.31	6.43	2.24	-5.85	-14.46	-	-
	C	0.0	1.50	3.60	4.20	3.02	0.13	3.36	-4.11	-	-
	D	0.0	0.41	1.37	1.78	1.15	-0.18	-1.28	-1.44	-	-
	E	0.0	3.09	5.56	5.98	4.45	0.92	4.45	-8.37	-	-
	I	0.0	4.61	4.80	4.67	4.29	3.61	2.45	.64	-2.42	-14.60
	II	0.0	5.30	8.15	8.64	8.10	6.70	4.27	-0.07	-8.18	-16.77
	III	0.0	3.08	5.79	6.86	6.64	5.36	2.91	-1.08	-6.67	-10.65
	IV	0.0	.64	2.31	3.55	3.82	2.82	.89	-1.54	-3.32	-3.49
	V	0.0	1.51	3.85	5.00	5.00	3.98	1.91	-1.40	-5.11	-5.92

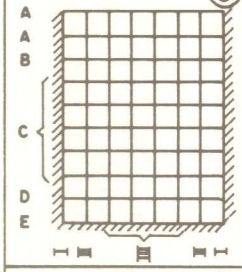
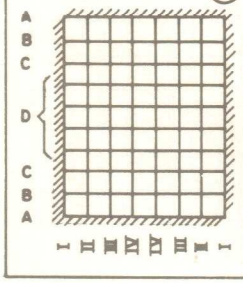


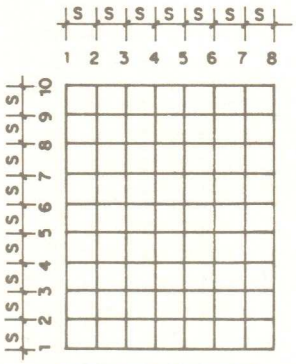
NERVIO TIPICO

TABLA Nº 7.23

LOSAS RETICULARES - RETICULO DE 7 x 9

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s									
		1	2	3	4	5	6	7	8	9	10
5 	A	-9.90	-3.15	2.83	5.27	5.27	2.83	-3.15	-9.90	-	-
	B	-2.33	-1.83	0.64	2.36	2.36	0.64	-1.83	-2.33	-	-
	C	-0.58	-0.54	0.08	0.74	0.74	0.08	-0.54	-0.58	-	-
	D	-5.39	-2.37	1.51	3.56	3.56	1.51	-2.37	-5.39	-	-
	E	-8.96	-1.00	2.11	3.36	3.36	2.11	-1.00	-8.96	-	-
	I	-11.86	-2.07	0.47	2.00	3.00	3.58	3.88	3.95	3.73	0.0
	II	-13.91	-6.94	-0.21	3.53	5.71	6.93	7.37	6.83	4.35	0.0
	III	-5.44	-4.67	-1.36	1.71	3.73	4.74	4.72	3.53	1.35	0.0
6 	A	-7.89	-0.14	1.65	2.43	2.43	1.65	-0.14	-7.89	-	-
	B	-7.93	-2.53	2.27	4.22	4.22	2.27	-2.53	-7.93	-	-
	C	-1.85	-1.46	0.51	1.87	1.87	0.51	-1.46	-1.85	-	-
	D	-0.46	0.42	0.07	0.58	0.58	0.07	0.42	-0.46	-	-
	I	-8.70	-0.93	0.95	1.94	2.39	2.39	1.94	0.95	-0.93	-8.70
	II	-9.55	-4.09	0.97	3.44	4.44	4.44	3.44	0.97	-4.09	-9.55
	III	-3.14	-2.62	-0.25	1.73	2.71	2.71	1.73	-0.25	-2.62	-3.14
	IV	-2.00	-1.73	-0.50	1.07	2.16	2.16	1.07	-0.50	-1.73	-2.00

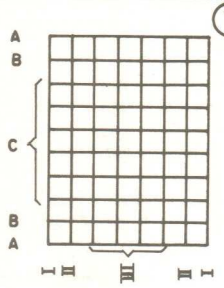
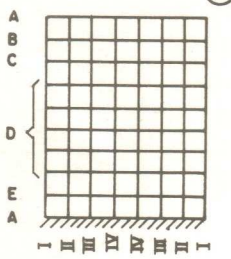


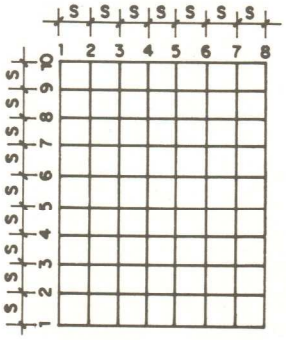
NERVIO TIPICO

TABLA Nº 7. 24

LOSAS RETICULARES - RETICULO DE 7 x 9

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P								
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
① 	A	8.06	2.12	0.70	0.0	-0.70	-2.12	-8.06	-	-
	B	5.73	5.26	2.46	0.0	-2.46	-5.26	-5.73	-	-
	C	0.78	2.17	1.48	0.0	-1.48	-2.17	-0.78	-	-
	I	7.75	1.45	0.16	-0.09	+0.02	+0.09	-0.16	-1.45	-7.75
	II	5.50	4.95	2.53	0.96	0.03	-0.96	-2.53	-4.95	-5.50
	III	0.19	1.65	2.13	1.47	0.0	-1.47	-2.13	-1.65	-0.19
② 	A	6.29	1.47	0.43	0.0	-0.43	-1.47	-6.29	-	-
	B	7.31	4.35	1.40	0.0	-1.40	-4.35	-7.31	-	-
	C	2.10	3.26	1.76	0.0	-1.76	-3.26	-2.10	-	-
	D	.75	1.76	1.29	0.0	-1.29	-1.76	-.75	-	-
	E	4.23	3.86	1.78	0.0	-1.78	-3.86	-4.23	-	-
	I	13.31	5.50	2.90	1.65	0.97	0.55	0.08	-1.05	-5.78
	II	5.20	7.17	5.00	2.97	1.54	0.31	-1.24	-3.34	-3.99
	III	-0.16	1.78	2.27	1.73	0.35	-0.15	-1.13	-1.60	-0.54
	IV	-.23	-.16	.92	1.19	.64	-.26	-.82	-.69	.06

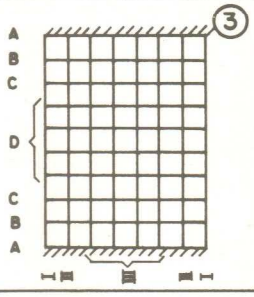
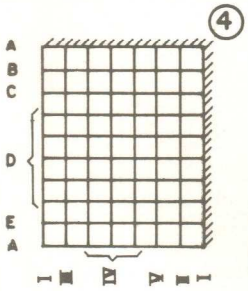


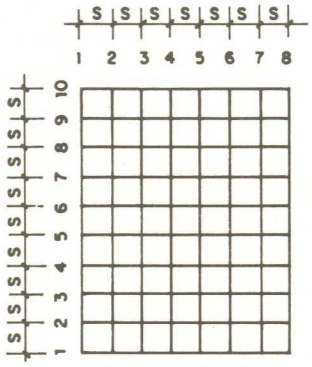
NERVIO TIPICO

TABLA Nº 7.24

LOSAS RETICULARES - RETICULO DE 7 x 9

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P								
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
	A	4.99	.43	.17	0.0	-.17	-.43	-4.99	-	-
	B	5.79	3.42	1.07	0.0	-1.07	-3.42	-5.79	-	-
	C	1.69	2.65	1.43	0.0	-1.43	-2.65	-1.69	-	-
	D	0.71	1.61	1.15	0.0	-1.15	-1.61	-0.71	-	-
	I	10.61	4.31	2.12	0.91	0.0	-0.91	-2.12	-4.31	-10.61
	II	4.06	5.42	3.46	1.56	0.0	-1.56	-3.46	-5.42	-4.06
	III	-0.24	1.10	1.32	.76	0.0	-.76	-1.32	-1.10	+0.24
	A	4.71	.90	-.32	-1.10	-2.22	-4.24	-12.20	-	-
	B	5.45	2.83	.02	-1.90	-4.19	-8.10	-8.60	-	-
	C	1.50	2.10	.61	-1.18	-2.89	-3.50	-.75	-	-
	D	.41	1.37	1.78	1.15	-.18	-1.28	-1.44	-	-
	E	3.09	2.46	0.42	-1.53	-3.53	-5.37	-3.92	-	-
	I	-4.61	-.68	.15	.43	.69	1.15	2.00	4.00	12.17
	II	-5.80	-2.84	-.49	-.58	1.37	2.42	4.35	8.10	8.59
	III	3.08	2.70	1.07	0.21	1.28	2.45	4.00	5.60	3.98
	IV	.63	-1.66	-1.32	-.33	1.00	2.04	2.35	1.86	0.15
	V	-1.51	-2.34	-1.19	0.0	1.02	2.06	3.32	3.71	.81

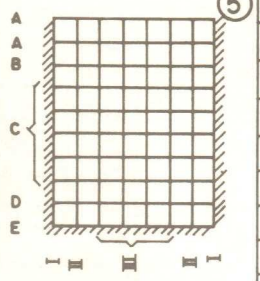
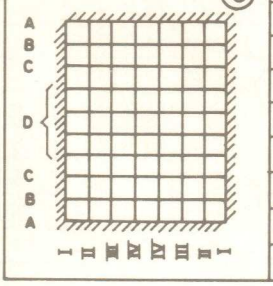


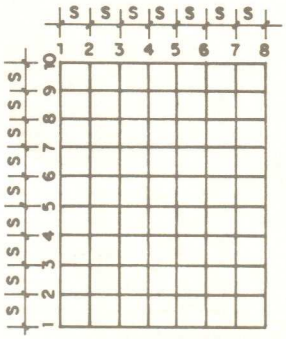
NERVIO TIPICO

TABLA Nº 7.24

LOSAS RETICULARES - RETICULO DE 7 x 9

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P								
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
	A	6.74	5.98	2.44	0.0	-2.44	-5.98	-6.74	-	-
	B	0.51	2.48	1.71	0.0	-1.71	-2.48	-0.51	-	-
	C	0.05	0.62	0.66	0.0	-0.66	-0.62	-0.05	-	-
	D	3.01	3.89	2.05	0.0	-2.05	-3.89	-3.01	-	-
	E	7.96	3.11	1.26	0.0	-1.26	-3.11	-7.96	-	-
	I	9.78	2.54	1.54	.99	.58	.29	.06	-.22	-3.73
	II	6.97	6.73	3.75	2.17	1.22	.44	-.54	-2.48	-4.35
	III	.76	3.31	3.07	2.03	1.01	-0.02	-1.20	-2.17	-1.35
	A	7.76	1.80	0.77	0.0	-0.77	-1.80	-7.76	-	-
	B	5.40	4.80	1.95	0.0	-1.95	-4.80	-5.40	-	-
	C	0.39	1.98	1.36	0.0	-1.36	-1.98	-0.39	-	-
	D	0.03	0.50	0.50	0.0	-0.50	-0.50	-0.03	-	-
	I	7.76	1.88	0.98	0.45	0.0	-0.45	-0.98	-1.88	-7.76
	II	5.46	5.06	2.47	1.00	0.0	-1.00	-2.47	-5.06	-5.46
	III	0.52	2.37	1.99	0.97	0.0	-0.97	-1.99	-2.37	-0.52
	IV	0.27	1.22	1.58	1.09	0.0	-1.09	-1.58	-1.22	-0.27

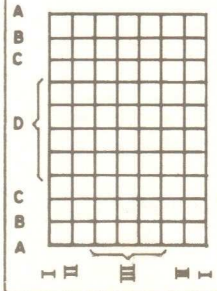
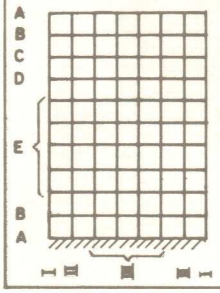


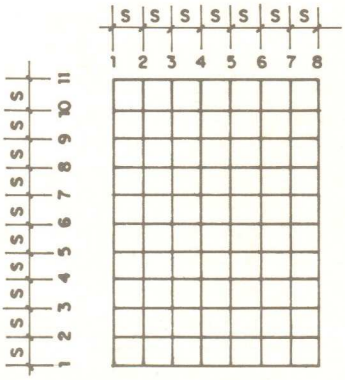
NERVIO TIPICO

TABLA Nº 7.25

LOSAS RETICULARES - RETICULO DE 7 x 10

COEFICIENTES DE MOMENTOS

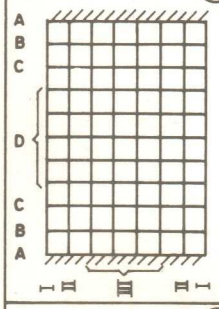
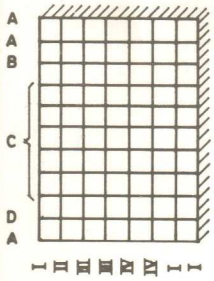
CASO	NERV.	μ = M/P.s										
		1	2	3	4	5	6	7	8	9	10	11
① 	A	0.0	8.75	10.95	11.78	11.78	10.95	8.75	0.0	-	-	-
	B	0.0	6.38	12.33	14.91	14.91	12.33	6.38	0.0	-	-	-
	C	0.0	0.73	3.35	5.20	5.20	3.35	0.73	0.0	-	-	-
	D	0.0	-0.70	-1.76	-2.56	-2.56	-1.76	-0.70	0.0	-	-	-
	I	0.0	8.25	9.63	9.77	9.57	9.46	9.57	9.77	9.63	8.25	0.0
	II	0.0	6.06	11.55	14.17	15.31	15.62	15.31	14.17	11.55	6.06	0.0
	III	0.0	0.85	4.10	7.11	8.94	9.54	8.94	7.11	4.10	0.85	0.0
② 	A	0.0	6.12	7.57	8.08	8.08	7.57	6.12	0.0	-	-	-
	B	0.0	8.11	11.74	13.01	13.01	11.74	8.11	0.0	-	-	-
	C	0.0	3.11	6.93	8.16	8.16	6.93	3.11	0.0	-	-	-
	D	0.0	1.64	3.96	5.44	5.44	3.96	1.64	0.0	-	-	-
	E	0.0	0.51	2.38	3.69	3.69	2.38	0.51	0.0	-	-	-
	I	-29.10	-12.10	-3.63	1.14	3.77	5.29	6.23	6.78	6.84	5.89	0.0
	II	-16.88	-12.83	-5.30	0.51	4.65	7.26	8.64	8.90	7.71	4.17	0.0
	III	-2.76	-3.40	-2.68	-0.30	1.78	3.30	3.95	3.62	2.24	0.40	0.0

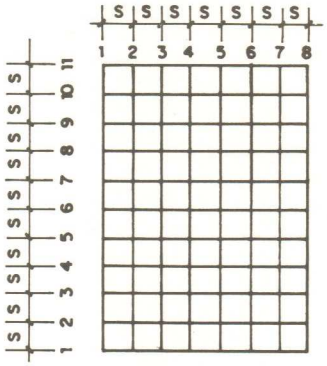


NERVIO TIPICO

TABLA Nº 7.25

LOSAS RETICULARES - RETICULO DE 7 x 10
COEFICIENTES DE MOMENTOS

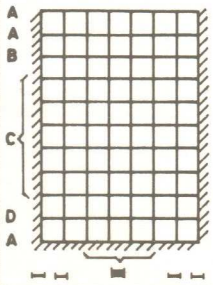
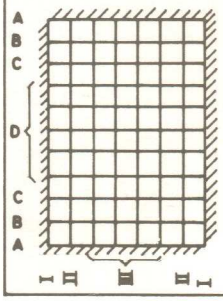
CASO	NERV.	μ = M/P.s										
		1	2	3	4	5	6	7	8	9	10	11
③ 	A	0.0	4.02	4.73	5.31	5.31	4.73	4.02	0.0	-	-	-
	B	0.0	6.31	9.10	10.10	10.10	9.10	6.31	0.0	-	-	-
	C	0.0	2.42	5.27	6.28	6.28	5.27	2.42	0.0	-	-	-
	D	0.0	1.30	3.19	4.38	4.38	3.19	1.30	0.0	-	-	-
	I	-20.80	-7.66	-1.31	2.12	3.75	4.23	3.75	2.12	-1.31	-7.66	-20.80
	II	-10.10	-7.21	-1.87	2.02	4.36	5.11	4.36	2.02	-1.87	-7.21	-10.10
	III	-0.91	-1.28	-0.86	0.41	1.35	1.70	1.35	0.41	-0.86	-1.28	-0.91
④ 	A	0.0	4.28	4.94	4.47	2.84	-0.50	-6.50	-18.90	-	-	-
	B	0.0	1.95	4.31	4.23	2.79	0.28	-3.30	-4.63	-	-	-
	C	0.0	0.98	2.22	2.62	1.83	0.16	-1.83	-2.84	-	-	-
	D	0.0	2.93	5.15	5.03	2.95	-0.80	-5.94	-8.63	-	-	-
	I	0.0	5.82	8.22	8.86	8.57	7.41	5.15	1.40	-4.33	-13.30	-23.10
	II	0.0	3.13	5.96	7.17	7.18	6.12	3.91	0.45	-4.24	-10.30	-13.85
	III	0.0	0.62	2.61	4.16	4.64	3.96	2.27	-0.14	-2.72	-3.87	-3.43
	IV	0.0	2.23	4.82	5.73	5.69	4.84	3.16	0.64	-2.54	-5.63	-6.22

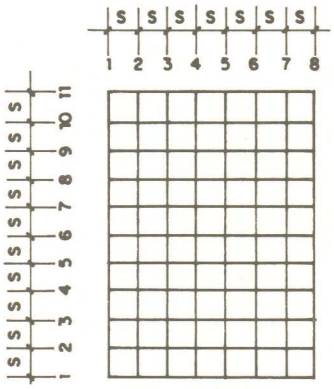


NERVIO TIPICO

LOSAS RETICULARES- RETICULO DE 7 x 10 TABLA Nº 7.25

COEFICIENTES DE MOMENTOS

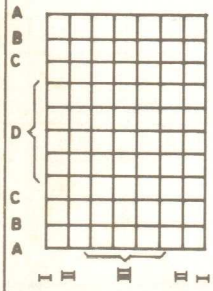
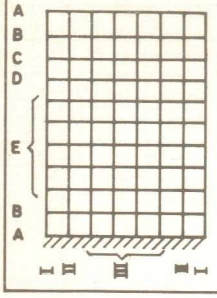
CASO	NERV.	μ = M/P.s										
		1	2	3	4	5	6	7	8	9	10	11
5 	A	-12.58	-4.05	1.45	3.68	3.68	1.45	-4.05	-12.58	-	-	-
	B	-2.94	-1.72	0.99	2.02	2.02	0.99	-1.72	-2.94	-	-	-
	C	-1.66	-0.94	0.43	1.34	1.34	0.43	-0.94	-1.66	-	-	-
	D	-4.80	-2.82	0.56	2.38	2.38	0.56	-2.82	-4.80	-	-	-
	I	-19.48	-6.88	-2.24	0.68	2.39	3.38	3.88	3.96	3.64	3.06	0.0
	II	-5.61	-5.16	-2.62	0.43	2.97	4.69	5.48	5.35	4.21	1.82	0.0
6 	A	-9.71	-1.78	0.39	1.64	1.64	0.39	-1.78	-9.71	-	-	-
	B	-8.91	-3.32	1.11	2.99	2.99	1.11	-3.32	-8.91	-	-	-
	C	-2.07	-1.26	0.66	1.63	1.63	0.66	-1.26	-2.07	-	-	-
	D	-1.12	-0.64	0.30	0.91	0.91	0.30	-0.64	-1.12	-	-	-
	I	-13.23	-3.94	- .73	1.16	2.08	2.36	2.08	1.16	-.73	-3.94	-13.23
	II	-11.86	-6.61	-1.20	2.07	3.89	4.47	3.89	2.07	-1.20	-6.61	-11.86
	III	-3.19	-2.76	-.77	1.18	2.48	2.93	2.48	1.18	-.77	-2.76	-3.19

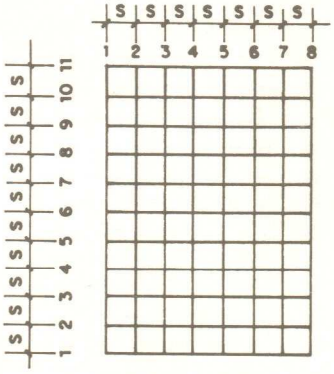


NERVIO TIPICO

TABLA Nº 7.26

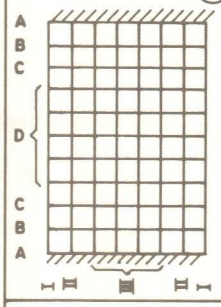
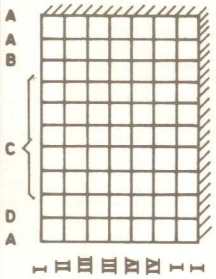
LOSAS RETICULARES - RETICULO DE 7 x 10
COEFICIENTES DE FUERZA CORTANTE

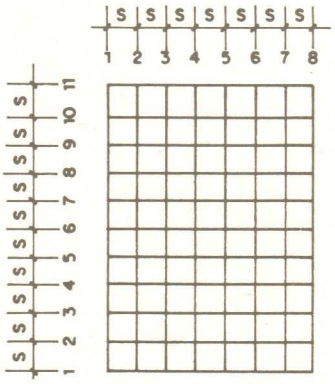
CASO	NERV.	ν = V/P									
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11
1 	A	8.75	2.19	0.84	0.00	-0.84	-2.19	-8.75	-	-	-
	B	6.38	5.95	2.57	0.00	-2.57	-5.95	-6.38	-	-	-
	C	0.74	2.61	1.85	0.00	-1.85	-2.61	-0.74	-	-	-
	D	-0.71	-1.01	-0.80	0.00	0.80	1.01	0.71	-	-	-
	I	8.25	1.37	0.15	-0.19	-0.11	0.11	0.19	-0.15	-1.37	-8.25
	II	6.06	5.49	2.62	1.14	0.31	-0.31	-1.14	-2.62	-5.49	-6.06
	III	0.86	3.24	3.01	1.82	0.61	-0.61	-1.82	-3.01	-3.24	-0.86
2 	A	6.12	1.45	0.51	0.00	-0.51	-1.45	-6.12	-	-	-
	B	8.11	4.08	1.72	0.00	-1.72	-4.08	-8.11	-	-	-
	C	3.11	3.82	1.23	0.00	-1.23	-3.82	-3.11	-	-	-
	D	1.64	2.32	1.48	0.00	-1.48	-2.32	-1.64	-	-	-
	E	0.61	1.15	0.81	0.00	-0.81	-1.15	-0.61	-	-	-
	I	17.00	8.38	4.77	2.63	1.52	0.93	0.54	0.06	-0.95	-5.89
	II	4.04	7.53	5.82	4.14	2.60	1.37	0.25	-1.18	-3.53	-4.17
	III	-0.64	0.72	2.31	2.16	1.51	0.65	-0.33	-1.38	-1.80	-0.44



NERVIO TIPICO

LOSAS RETICULARES - RETICULO DE 7 x 10 TABLA Nº 7.26
COEFICIENTES DE FUERZA CORTANTE

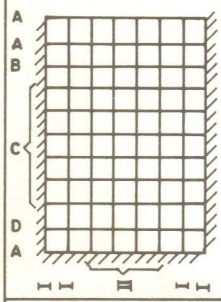
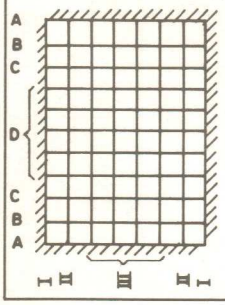
CASO	NERV.	ν = V/P									
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11
3 	A	4.02	0.71	0.58	0.00	-0.58	-0.71	-4.02	-	-	-
	B	6.30	2.80	0.99	0.00	-0.99	-2.80	-6.30	-	-	-
	C	2.42	2.85	1.01	0.00	-1.01	-2.85	-2.42	-	-	-
	D	1.31	1.88	1.19	0.00	-1.19	-1.88	-1.31	-	-	-
	I	13.16	6.35	3.43	1.63	0.47	-0.47	-1.63	-3.43	-6.35	-13.16
	II	2.82	5.33	3.90	2.33	0.75	-0.75	-2.33	-3.90	-5.33	-2.82
	III	0.38	0.42	1.26	0.95	0.34	-0.34	-0.95	-1.26	-0.42	-0.38
4 	A	5.59	1.99	-0.59	-2.49	-4.63	-8.14	-13.25	-	-	-
	B	1.95	2.35	-0.07	-1.44	-2.50	-3.59	-1.32	-	-	-
	C	0.98	1.23	0.41	-0.79	-1.67	-2.00	-1.00	-	-	-
	D	2.93	2.22	-0.12	-2.07	-3.72	-5.12	-2.69	-	-	-
	I	-4.06	-0.63	0.07	0.38	0.62	1.02	1.81	3.28	5.74	11.83
	II	-3.13	-2.83	-1.20	-0.02	1.06	2.21	3.45	4.70	6.09	3.50
	III	-0.66	-1.61	-1.54	-0.61	0.64	1.67	2.17	1.96	1.59	0.69
	IV	-2.22	-2.59	-1.40	-0.34	0.84	1.68	3.52	3.18	3.09	1.11

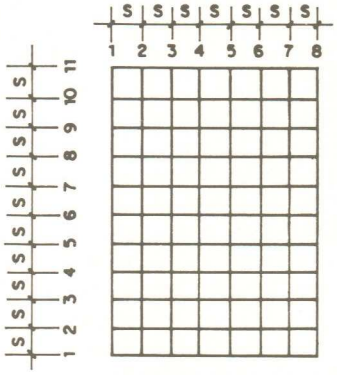


NERVIO TIPICO

TABLA Nº 7.26

LOSAS RETICULARES - RETICULO DE 7 x 10
COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P									
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11
5 	A	9.47	2.33	1.56	0.00	-1.56	-2.33	-9.47	-	-	-
	B	1.22	2.72	1.21	0.00	-1.21	-2.72	-1.22	-	-	-
	C	0.72	1.38	0.91	0.00	-0.91	-1.38	-0.72	-	-	-
	D	1.97	3.38	1.82	0.00	-1.82	-3.38	-1.97	-	-	-
	I	12.60	7.59	5.09	3.42	2.09	1.02	0.09	-0.81	-2.25	-4.66
	II	1.06	2.53	3.06	2.54	1.81	0.81	-0.40	-1.55	-2.08	-2.39
6 	A	7.93	2.18	1.25	0.00	-1.25	-2.18	-7.93	-	-	-
	B	5.59	4.43	1.87	0.00	-1.87	-4.43	-5.59	-	-	-
	C	0.81	1.93	0.96	0.00	-0.96	-1.93	-0.81	-	-	-
	D	0.48	0.94	0.61	0.00	-0.61	-0.94	-0.48	-	-	-
	I	9.29	3.20	1.90	0.92	0.27	-.27	-.92	-1.90	-3.20	-9.29
	II	5.25	5.41	3.27	1.81	0.57	-0.57	-1.81	-3.27	-5.41	-5.25
	III	0.74	1.62	1.60	1.20	0.44	-.44	-1.20	-1.60	-1.62	-.74

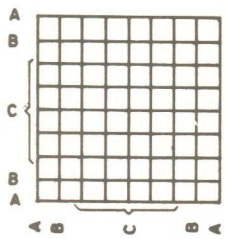
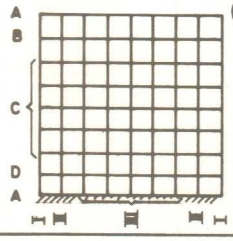
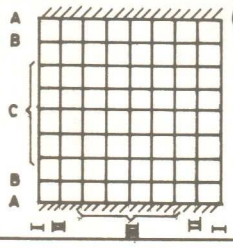


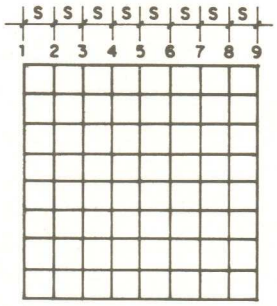
NERVIO TIPICO

TABLA Nº 7.27

LOSAS RETICULARES - RETICULO DE 8 x 8

COEFICIENTES DE MOMENTOS

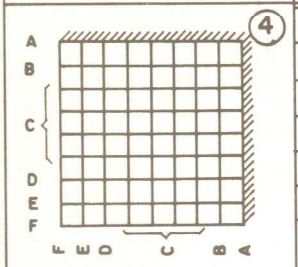
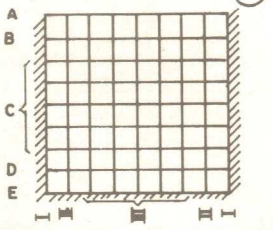
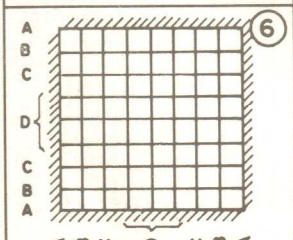
CASO	NERV.	μ = M/P.s								
		1	2	3	4	5	6	7	8	9
	A	0.0	7.80	9.62	10.16	10.28	10.16	9.62	7.80	0.0
	B	0.0	5.43	10.46	12.17	13.63	12.17	10.46	5.48	0.0
	C	0.0	0.79	3.06	4.84	5.46	4.84	3.06	0.79	0.0
	A	0.0	5.77	6.96	7.20	7.24	7.20	6.96	5.77	0.0
	B	0.0	4.16	7.99	9.93	10.48	9.93	7.99	4.16	0.0
	C	0.0	0.81	2.92	4.61	5.21	4.61	2.92	0.81	0.0
	D	0.0	7.15	11.29	12.62	12.92	12.62	11.29	7.15	0.0
	I	-17.69	-4.33	1.38	4.53	6.32	7.18	7.21	5.93	0.0
	II	-12.63	-7.41	-0.15	4.89	7.69	8.59	7.51	4.08	0.0
	III	-2.12	-2.34	-0.77	1.15	2.38	2.61	1.81	0.45	0.0
	A	0.0	4.99	5.39	5.57	5.63	5.57	5.39	4.99	0.0
	B	0.0	5.82	9.30	10.48	10.76	10.48	9.30	5.82	0.0
	C	0.0	1.79	4.70	6.48	7.02	6.48	4.70	1.79	0.0
	I	-12.92	-2.24	2.11	4.18	4.81	4.18	2.11	-2.24	-12.92
	II	-8.34	-4.26	1.17	4.50	5.56	4.50	1.17	-4.26	-8.34
	III	-0.88	-1.15	-0.13	1.02	1.46	1.02	-0.13	-1.15	-0.88

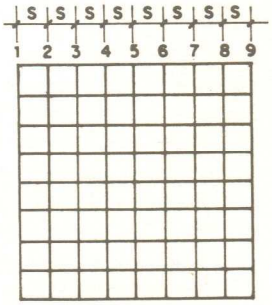


NERVIO TIPICO

LOSAS RETICULARES- RETICULO DE 8 x 8 TABLA Nº 7.27

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s								
		1	2	3	4	5	6	7	8	9
	A	0.0	4.39	5.23	5.14	4.53	3.31	1.11	-3.06	-13.11
	B	0.0	3.04	5.59	6.40	5.73	3.66	-0.07	-5.53	-9.47
	C	0.0	0.47	1.63	2.39	2.19	1.01	-0.67	-1.94	-2.16
	D	0.0	1.47	3.65	4.57	4.15	2.47	-0.60	-4.17	-4.94
	E	0.0	5.36	8.23	8.60	7.61	5.33	1.00	-7.13	-15.78
	F	0.0	4.67	4.91	4.74	4.18	3.04	1.19	-1.92	-14.18
	A	-1.67	-1.63	1.60	3.09	3.54	3.09	1.60	-1.63	-9.67
	B	-6.24	-3.17	0.89	3.34	4.12	3.34	0.89	-3.17	-6.24
	C	-2.94	-2.41	0.20	2.23	2.88	2.23	0.20	-2.41	-2.94
	D	-11.08	-4.23	2.00	4.90	5.73	4.90	2.00	-4.23	-11.08
	E	-10.55	-0.75	1.61	2.81	3.21	2.81	1.61	-0.75	-10.55
	I	-11.34	-1.51	0.97	2.42	3.31	3.76	3.90	3.73	0.0
	II	-12.66	-5.72	0.81	4.28	6.10	6.89	6.61	4.31	0.0
	III	-4.18	-3.52	-0.52	2.08	3.52	3.89	3.10	1.24	0.0
	A	-8.44	-0.57	1.29	2.23	2.53	2.23	1.29	-0.57	-8.44
	B	-8.85	-3.36	1.62	3.90	4.55	3.90	1.62	-3.36	-8.85
	C	-2.41	-1.97	0.17	1.82	2.35	1.82	0.17	-1.97	-2.41
	D	-0.97	-0.84	-0.07	0.81	1.19	0.81	-0.07	-0.84	-0.97

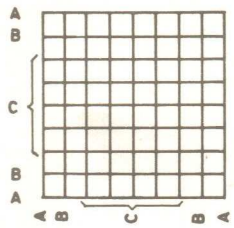
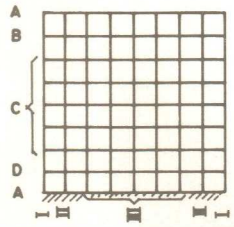
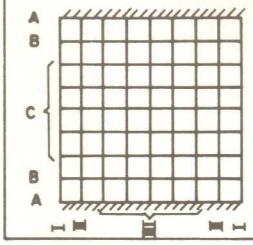


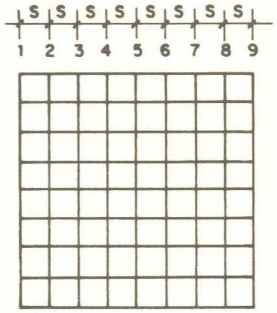
NERVIO TIPICO

TABLA Nº 7.28

LOSAS RETICULARES – RETICULO DE 8 x 8

COEFICIENTES DE FUERZA CORTANTE

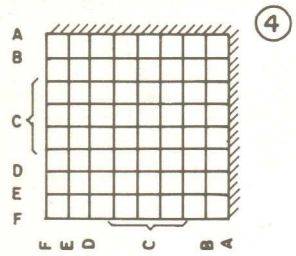
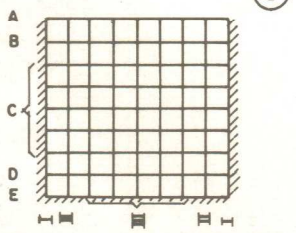
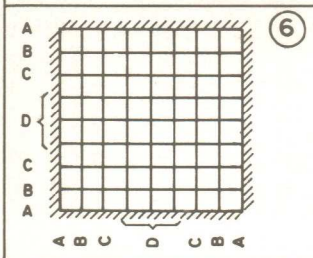
CASO	NERV.	ν = V/P							
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
	A	7.80	1.83	.54	.13	-.13	-.54	-1.83	-7.80
	B	5.48	4.98	2.51	0.71	-.71	-2.51	-4.98	-5.48
	C	.79	2.27	1.78	0.61	-0.61	-1.78	-2.27	-.79
	A	5.77	1.19	0.24	0.03	-0.03	-0.24	-1.19	-5.77
	B	4.16	3.83	1.93	0.55	-0.55	-1.93	-3.83	-4.16
	C	2.07	3.28	1.94	0.59	-0.59	-1.94	-3.28	-2.07
	D	7.14	4.13	1.34	0.30	-0.30	-1.34	-4.13	-7.14
	I	-13.36	-5.71	-3.14	-1.78	-0.86	-0.02	1.27	5.93
	II	-5.23	-7.25	-5.04	-2.80	-0.90	1.09	3.41	4.08
	III	0.22	-1.57	-1.93	-1.23	-0.22	0.80	1.35	0.45
	A	0.94	2.20	1.91	0.73	-0.73	-1.91	-2.20	-0.94
	B	0.75	1.89	1.80	0.75	-0.75	-1.80	-1.89	-0.75
	C	1.79	2.39	1.90	0.73	-0.73	-1.90	-2.89	-1.79
	I	10.68	4.36	2.06	0.62	-.62	-2.06	-4.36	-10.68
	II	4.09	5.43	3.32	1.06	-1.06	-3.32	-5.43	-4.09
	III	-0.38	1.02	1.14	0.44	-0.44	-1.14	-1.02	+0.38

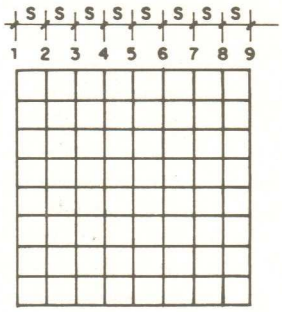


NERVIO TIPICO

TABLA Nº 7.28

LOSAS RETICULARES - RETICULO DE 8 x 8
COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	$\nu = V/P^{-}$							
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9
	A	4.39	0.84	-0.09	-0.61	-1.21	-2.19	-4.17	-10.05
	B	3.04	2.55	0.80	-0.66	-2.06	-3.74	-5.45	-3.94
	C	0.47	1.16	0.75	-0.20	-1.18	-1.68	-1.27	-0.22
	D	1.47	2.18	0.92	-0.43	-1.67	-3.07	-3.57	-0.76
	E	5.36	2.86	0.37	-0.99	-2.27	-4.33	-8.14	-8.64
	F	4.67	0.23	-0.16	-0.56	-1.13	-1.85	-3.11	-12.26
	A	8.04	3.23	1.49	0.44	-0.44	-1.49	-3.23	-8.04
	B	3.06	4.07	2.45	0.77	-0.77	-2.45	-4.07	-3.06
	C	0.53	2.61	2.02	0.65	-0.65	-2.02	-2.61	-0.53
	D	6.85	6.24	2.90	0.83	-0.83	-2.90	-6.24	-6.85
	E	9.80	2.36	1.20	0.39	-0.39	-1.20	-2.36	-9.80
	I	-9.80	-2.48	-1.45	-0.88	-0.45	-0.14	0.17	3.73
	II	-6.94	-6.54	-3.46	-1.81	-0.79	0.28	2.31	4.30
	III	-0.66	-3.00	-2.60	-1.44	-0.37	0.79	1.86	1.24
	A	7.86	1.87	0.93	0.30	-0.30	-0.93	-1.87	-7.86
	B	5.48	4.98	2.28	0.64	-0.64	-2.28	-4.98	-5.48
	C	0.44	2.14	1.64	0.53	-0.53	-1.64	-2.14	-0.44
	D	0.13	0.76	0.88	0.38	-0.38	-0.88	-0.76	-0.13

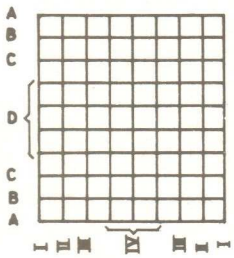
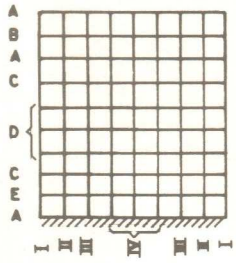


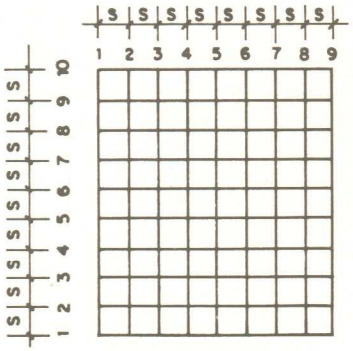
NERVIO TIPICO

TABLA Nº 7.29

LOSAS RETICULARES - RETICULO DE 8 x 9

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s									
		1	2	3	4	5	6	7	8	9	10
① 	A	0.0	9.34	11.72	12.55	12.77	12.55	11.72	9.34	0.0	-
	B	0.0	6.65	12.85	16.10	17.04	16.10	12.85	6.65	0.0	-
	C	0.0	1.00	3.78	5.97	6.73	5.97	3.78	1.00	0.0	-
	D	0.0	-0.12	0.60	1.50	1.90	1.50	0.60	-0.13	0.0	-
	I	0.0	9.10	11.05	11.49	11.53	11.53	11.49	11.05	9.10	0.0
	II	0.0	6.45	12.33	15.36	16.50	16.50	15.36	12.33	6.45	0.0
	III	0.0	1.05	4.01	6.50	7.74	7.74	6.50	4.01	1.05	0.0
	IV	0.0	0.11	1.45	3.16	4.31	4.31	3.16	1.45	0.11	0.0
② 	A	0.0	7.18	8.30	8.77	9.19	8.77	8.30	7.18	0.0	-
	B	0.0	8.32	13.26	14.94	15.35	14.94	13.26	8.32	0.0	-
	C	0.0	0.96	3.28	5.25	5.99	5.25	3.28	0.96	0.0	-
	D	0.0	0.41	1.58	2.72	3.21	2.72	1.58	0.41	0.0	-
	E	0.0	4.85	9.36	11.67	12.34	11.66	9.36	4.85	0.0	-
	I	-21.37	-5.98	0.58	4.23	6.41	7.70	8.30	8.21	6.78	0.0
	II	-16.20	-10.14	-1.65	4.41	8.11	10.10	10.35	8.76	4.71	0.0
	III	-3.47	-3.66	-1.61	0.97	2.87	3.79	3.64	2.41	0.52	0.0
	IV	-0.43	-0.79	-0.81	-0.22	0.59	1.03	0.86	0.29	-0.16	0.0

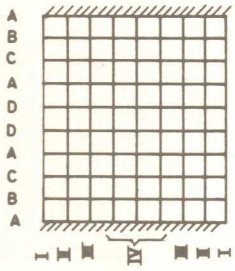
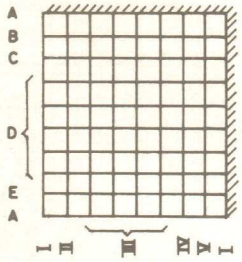


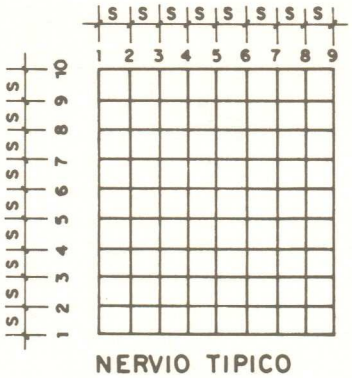
NERVIO TIPICO

TABLA Nº 7.29

LOSAS RETICULARES - RETICULO DE 8 x 9

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s									
		1	2	3	4	5	6	7	8	9	10
③ 	A	0.0	5.70	6.17	6.39	6.47	6.39	6.17	5.70	0.0	-
	B	0.0	6.63	10.56	11.92	12.23	11.92	10.56	6.63	0.0	-
	C	0.0	2.00	5.22	7.16	7.73	7.16	5.22	2.00	0.0	-
	D	0.0	0.65	2.24	3.72	4.34	3.72	2.24	0.65	0.0	-
	I	-15.74	-3.45	1.66	4.20	5.40	5.40	4.20	1.66	-3.45	-15.74
	II	-10.83	-6.10	0.39	4.61	6.54	6.54	4.61	0.39	-6.10	-10.83
	III	-1.61	-1.86	-0.51	1.12	2.01	2.01	1.12	-0.51	-1.86	-1.61
	IV	1.12	0.79	0.07	-0.58	-0.78	-0.78	-0.58	0.07	0.79	1.12
④ 	A	0.0	5.37	5.70	5.50	4.80	3.53	1.30	-3.69	-13.31	-
	B	0.0	6.30	9.60	10.10	8.93	6.20	1.08	-8.34	-18.26	-
	C	0.0	1.73	4.30	5.41	4.91	2.91	-0.73	-4.90	-5.81	-
	D	0.0	0.56	1.91	2.78	2.56	1.20	-0.71	-2.25	-2.52	-
	E	0.0	3.55	6.56	7.55	6.77	4.29	-0.14	-6.49	-11.10	-
	I	0.0	5.32	5.88	5.81	5.34	4.50	3.07	0.67	-4.14	-16.90
	II	0.0	3.52	6.57	7.75	7.50	6.08	3.32	-1.21	-7.60	-12.12
	III	0.0	0.66	2.27	3.52	3.73	2.79	-0.35	-1.50	-3.23	-3.57
	IV	0.0	1.73	4.37	5.68	5.62	4.50	2.21	-1.56	-5.80	-6.72
	V	0.0	6.13	9.46	10.10	9.46	7.83	4.95	-0.17	-9.55	-19.43

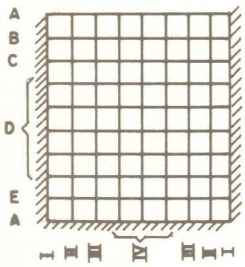
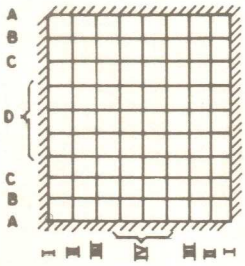


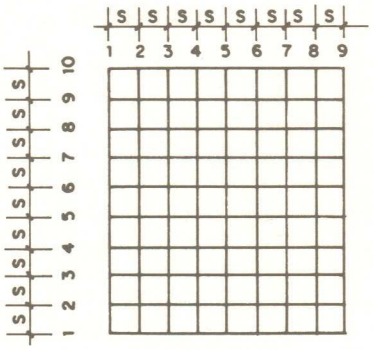
NERVIO TIPICO

TABLA Nº 7.29

LOSAS RETICULARES - RETICULO DE 8 x 9

COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s									
		1	2	3	4	5	6	7	8	9	10
⑤ 	A	-12.03	-0.88	1.83	3.22	3.69	3.22	1.83	-0.88	-12.03	-
	B	-12.70	-4.89	2.28	5.65	6.63	5.65	2.28	-4.89	-12.70	-
	C	-3.47	-2.83	0.23	2.63	3.42	2.63	0.23	-2.83	-3.47	-
	D	-1.16	-1.04	-0.12	1.00	1.49	1.00	-0.12	-1.04	-1.16	-
	E	-7.24	-3.71	1.01	3.90	4.83	3.90	1.01	-3.71	-7.24	-
	I	-13.53	-2.33	0.55	2.29	3.41	4.07	4.40	4.49	4.26	0.0
	II	-15.71	-7.77	-0.17	4.00	6.38	7.71	8.23	7.68	4.94	0.0
	III	-5.80	-4.99	-1.38	+1.87	3.92	4.93	4.96	3.77	1.48	0.0
	IV	-3.77	-3.34	-1.52	0.90	2.95	3.96	3.72	2.40	0.72	0.0
⑥ 	A	-9.62	-0.69	1.47	2.57	2.93	2.57	1.47	-0.69	-9.62	-
	B	-10.14	-3.89	1.83	4.50	5.26	4.50	1.83	-3.89	-10.14	-
	C	-2.77	-2.26	0.19	2.09	2.72	2.09	0.19	-2.26	-2.77	-
	D	-1.00	-0.88	-0.09	0.85	1.25	0.85	-0.09	-0.88	-1.00	-
	I	-10.00	-1.01	1.07	2.24	2.79	2.79	2.24	1.07	-1.01	-10.00
	II	-10.93	-4.68	1.10	3.94	5.10	5.10	3.94	1.10	-4.68	-10.93
	III	-3.41	-2.86	-0.25	1.91	2.91	2.91	1.91	-0.25	-2.86	-3.41
	IV	-1.78	-1.55	-0.43	0.97	1.89	1.89	0.97	-0.43	-1.55	-1.78

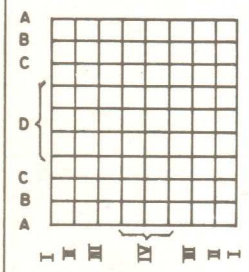
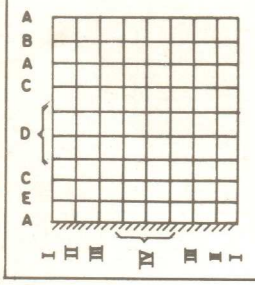


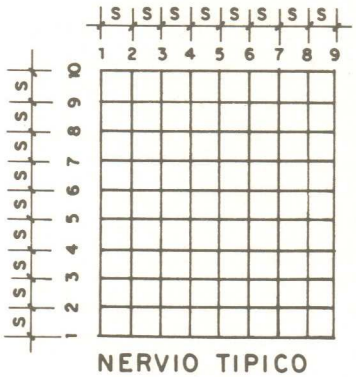
NERVIO TIPICO

TABLA Nº 7.30

LOSAS RETICULARES - RETICULO DE 8 x 9

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P								
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
① 	A	9.34	2.38	0.83	0.22	-0.22	-0.83	-2.38	-9.34	-
	B	6.65	6.20	3.24	0.95	-0.95	-3.24	-6.20	-6.65	-
	C	1.00	2.78	2.19	0.77	-0.77	-2.19	-2.78	-1.00	-
	D	-0.12	0.72	0.91	0.40	-0.40	-0.91	-0.72	+0.12	-
	I	9.10	1.95	0.48	0.12	0.03	-0.12	-0.48	-1.95	-9.10
	II	6.45	5.87	3.06	1.20	0.04	-1.20	-3.06	-5.87	-6.45
	III	1.05	2.96	2.49	1.24	0.02	-1.24	-2.49	-2.96	-1.05
	IV	+0.11	1.35	1.71	1.16	0.01	-1.16	-1.71	-1.35	-0.11
② 	A	7.18	3.83	2.28	0.66	-0.66	-2.28	-3.83	-7.18	-
	B	8.33	4.93	1.69	0.41	-0.41	-1.69	-4.93	-8.33	-
	C	0.96	2.31	1.97	0.73	-0.73	-1.97	-2.31	-0.96	-
	D	0.41	1.17	1.14	0.49	-0.49	-1.14	-1.17	-0.41	-
	E	4.85	4.51	2.31	0.67	-0.67	-2.31	-4.51	-4.85	-
	I	15.39	6.56	3.64	2.18	1.27	0.61	-0.08	-1.43	-6.79
	II	6.07	8.48	6.07	3.70	1.92	0.33	-1.59	-4.05	-4.72
	III	-0.18	2.05	2.58	1.90	0.92	-0.15	-1.23	-1.78	-0.62
	IV	-0.31	-0.03	0.59	0.81	0.44	-0.17	-0.57	-0.45	0.16

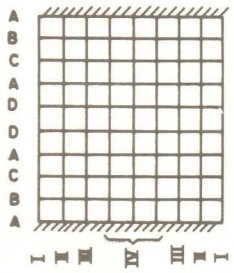
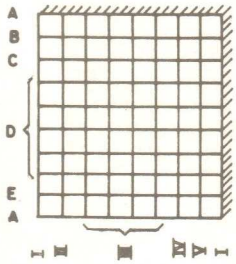


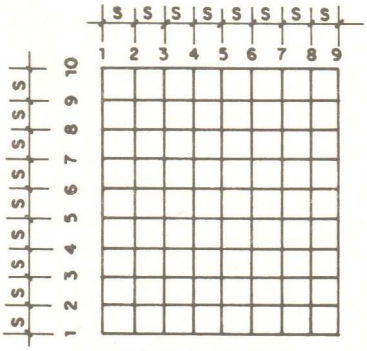
NERVIO TIPICO

TABLA Nº 7.30

LOSAS RETICULARES - RETICULO DE 8 x 9

COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P								
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
③ 	A	5.71	0.47	0.22	0.08	-0.08	-0.22	-0.47	-5.71	-
	B	6.63	3.94	1.35	0.32	-0.32	-1.35	-3.94	-6.63	-
	C	1.99	3.18	1.92	0.56	-0.56	-1.92	-3.18	-1.99	-
	D	0.65	1.59	1.48	0.62	-0.62	-1.48	-1.59	-0.65	-
	I	12.29	5.09	2.60	1.16	0.0	-1.16	-2.60	-5.09	-12.29
	II	4.76	6.44	4.23	1.97	0.0	-1.97	-4.23	-6.44	-4.76
	III	-0.25	1.35	1.60	0.92	0.0	-0.92	-1.60	-1.35	+0.25
	IV	-0.33	-0.71	-0.61	-0.23	0.0	+0.23	+0.61	+0.71	+0.33
④ 	A	5.37	1.07	-0.15	-0.73	-1.50	-2.60	-4.90	-14.01	-
	B	6.21	3.38	0.50	-1.15	-2.73	-5.12	-9.43	-9.92	-
	C	1.73	2.56	1.11	-0.50	-2.00	-3.63	-4.17	-0.91	-
	D	0.56	1.34	0.88	-0.22	-1.37	-1.96	-1.49	-0.27	-
	E	3.55	3.01	0.99	-0.79	-2.47	-4.43	-6.35	-4.55	-
	I	-4.96	-0.91	0.11	0.47	0.85	1.42	2.48	4.72	14.00
	II	-3.52	-3.05	-1.19	0.25	1.43	2.76	4.53	6.37	4.54
	III	-0.66	-1.60	-1.25	-0.22	0.95	1.94	2.35	1.72	0.34
	IV	-1.73	-2.64	-1.30	0.06	1.12	2.29	3.77	4.24	0.93
	V	-6.13	-3.33	-0.63	0.64	1.62	2.88	5.11	9.38	9.89

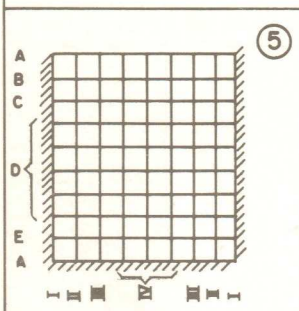
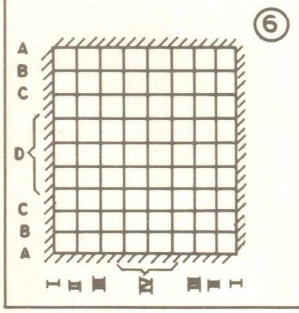


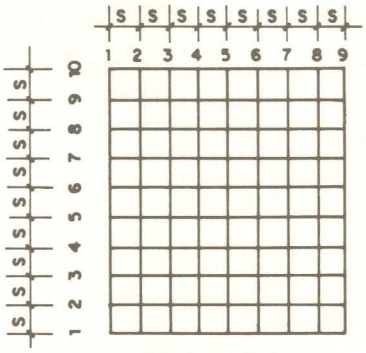
NERVIO TIPICO

TABLA Nº 7.30

LOSAS RETICULARES - RETICULO DE 8 x 9

COEFICIENTES DE FUERZA CORTANTE

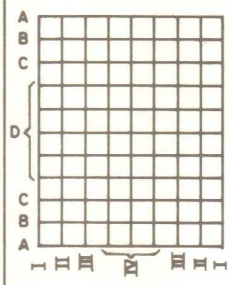
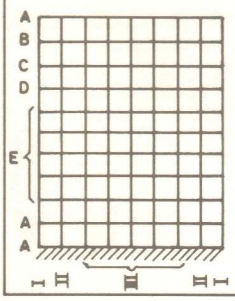
CASO	NERV.	ν = V/P								
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
	A	11.15	2.71	1.39	0.46	-0.46	-1.39	-2.71	-11.15	-
	B	7.82	7.16	3.37	0.98	-0.98	-3.37	-7.16	-7.82	-
	C	0.64	3.07	2.40	0.80	-0.80	-2.40	-3.07	-0.64	-
	D	0.12	0.92	1.12	0.49	-0.49	-1.12	-0.92	-0.12	-
	E	3.53	4.72	2.89	0.93	-0.93	-2.89	-4.72	-3.53	-
	I	11.20	2.88	1.74	1.12	0.66	0.34	0.08	-0.23	-4.26
	II	7.94	7.60	4.18	2.37	1.33	0.51	-0.55	-2.74	-4.94
	III	-0.82	3.60	3.26	2.05	1.01	0.03	-1.19	-2.30	-1.48
	IV	0.43	1.82	2.42	2.05	1.01	-0.25	-1.32	-1.68	-0.73
	A	+8.92	2.16	1.10	0.36	-0.36	-1.10	-2.16	-8.92	-
	B	6.25	5.72	2.66	0.77	-0.77	-2.66	-5.72	-6.25	-
	C	0.51	2.45	1.91	0.63	-0.63	-1.91	-2.45	-0.51	-
	D	0.12	0.79	0.93	0.40	-0.40	-0.93	-0.79	-0.12	-
	I	8.91	2.17	1.16	0.55	0.0	-0.55	-1.16	-2.17	-8.91
	II	6.25	5.78	2.84	1.16	0.0	-1.16	-2.84	-5.78	-6.25
	III	0.56	2.61	2.15	1.00	0.0	-1.00	-2.15	-2.61	-0.56
	IV	0.23	1.13	1.40	0.92	0.0	-0.92	-1.40	-1.13	-0.23

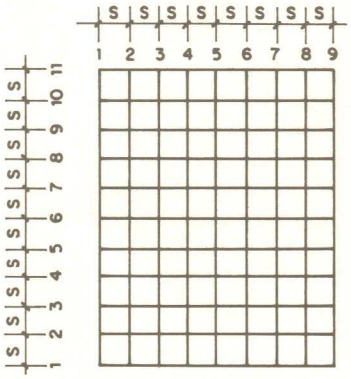


NERVIO TIPICO

TABLA Nº 7.31

LOSAS RETICULARES - RETICULO DE 8 x 10
COEFICIENTES DE MOMENTOS

CASO	NERV.	μ = M/P.s										
		1	2	3	4	5	6	7	8	9	10	11
① 	A	0.0	11.20	15.10	17.00	17.60	17.0	15.10	11.20	0.0	-	-
	B	0.0	5.86	11.60	14.67	15.62	14.67	11.60	5.86	0.0	-	-
	C	0.0	0.75	3.42	5.55	6.26	5.55	3.42	0.75	0.0	-	-
	D	0.0	-0.46	-1.16	-1.78	-2.02	-1.78	-1.16	-0.46	0.0	-	-
	I	0.0	8.22	10.10	10.70	10.80	10.83	10.80	10.70	10.10	8.22	0.0
	II	0.0	6.75	12.58	15.50	16.83	17.20	16.83	15.50	12.58	6.75	0.0
	III	0.0	1.52	4.84	7.71	9.31	9.80	9.30	7.71	4.84	1.52	0.0
	IV	0.0	0.83	2.72	5.04	6.85	7.51	6.85	5.04	2.72	0.83	0.0
② 	A	0.0	7.82	10.37	11.51	11.83	11.51	10.37	7.82	0.0	-	-
	B	0.0	8.29	12.13	13.82	14.37	13.82	12.13	8.29	0.0	-	-
	C	0.0	3.28	7.39	8.84	9.22	8.84	7.39	3.28	0.0	-	-
	D	0.0	1.82	4.45	6.30	6.35	6.30	4.45	1.82	0.0	-	-
	E	0.0	0.58	2.61	4.21	4.75	4.21	2.61	0.58	0.0	-	-
	I	-31.50	-13.50	-4.26	1.19	4.33	6.16	7.19	7.60	7.33	5.98	0.0
	II	-19.25	-14.33	-5.93	0.63	5.40	8.41	9.95	10.11	8.65	4.76	0.0
	III	-3.34	-3.61	-2.75	-0.23	2.09	3.69	4.42	4.17	2.82	0.90	0.0

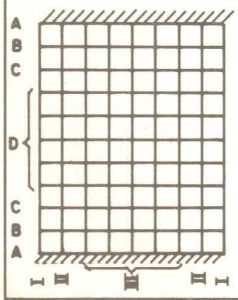
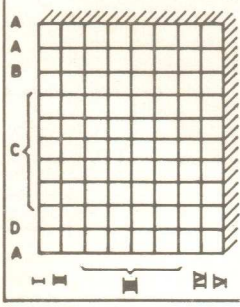


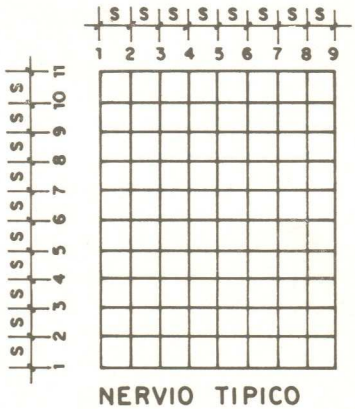
NERVIO TIPICO

TABLA Nº 7.31

LOSAS RETICULARES - RETICULO DE 8 x 10

COEFICIENTES DE MOMENTOS

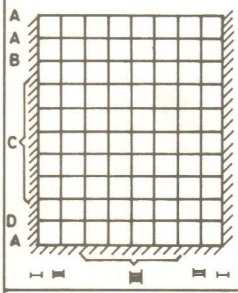
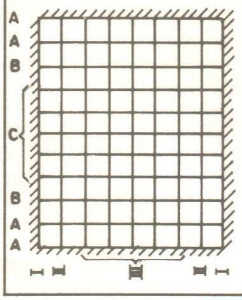
CASO	NERV.	μ = M/P.s										
		1	2	3	4	5	6	7	8	9	10	11
3 	A	0.0	5.68	7.29	8.45	8.82	8.45	7.29	5.68	0.0	-	-
	B	0.0	6.48	9.46	10.80	11.22	10.80	9.46	6.48	0.0	-	-
	C	0.0	2.56	5.72	6.98	7.33	6.98	5.72	2.56	0.0	-	-
	D	0.0	1.48	3.72	5.35	5.86	5.35	3.72	1.48	0.0	-	-
	I	-22.50	-8.55	-1.58	2.31	4.24	4.81	4.23	2.31	-1.58	-8.54	-22.50
	II	-11.86	-8.27	-2.18	2.31	5.06	5.96	5.06	2.31	-2.18	-8.27	-11.86
	III	-1.48	-1.54	-.94	0.54	1.66	2.06	1.66	0.53	-.95	-1.54	-1.48
4 	A	0.0	5.81	8.20	8.34	6.88	3.73	-2.00	-10.40	-22.60	-	-
	B	0.0	2.14	4.83	5.15	4.24	2.36	-0.52	-4.41	-5.61	-	-
	C	0.0	1.13	2.64	3.37	2.92	1.58	-0.43	-2.67	-3.76	-	-
	D	0.0	2.80	5.22	5.73	4.69	2.19	-1.65	-7.10	-10.50	-	-
	I	0.0	4.18	5.08	5.18	4.85	4.16	2.96	-0.86	-2.87	-9.24	-21.92
	II	0.0	3.59	6.55	7.77	7.74	6.58	4.24	0.56	-4.50	-11.09	-15.27
	III	0.0	2.32	5.23	6.25	6.17	5.26	3.48	0.77	-2.72	-6.20	-6.60
	IV	0.0	5.96	8.80	9.69	9.45	8.19	5.67	1.51	-4.80	-14.70	-23.40
	V	0.0	4.24	4.59	5.03	4.95	4.33	3.07	0.85	-2.95	-8.46	-25.90

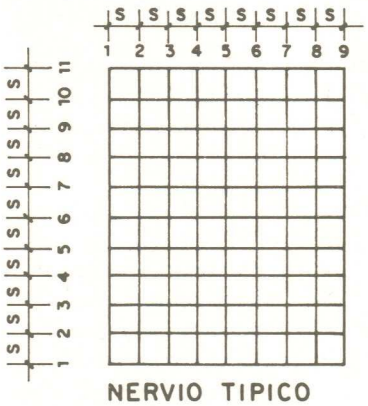


NERVIO TIPICO

TABLA Nº 7.31

LOSAS RETICULARES - RETICULO DE 8 x 10
COEFICIENTES DE MOMENTOS

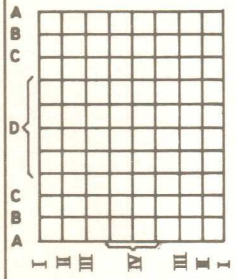
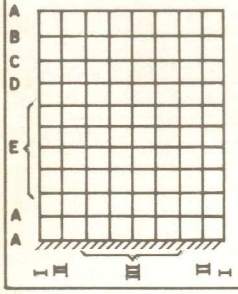
CASO	NERV.	μ = M/P.s										
		1	2	3	4	5	6	7	8	9	10	11
5 	A	-15.70	-5.03	0.33	3.23	4.13	3.23	0.33	-5.03	-15.70	-	-
	B	-3.63	-2.44	0.60	2.26	2.78	2.26	0.60	-2.44	-3.63	-	-
	C	-2.22	-1.41	0.19	1.41	1.83	1.41	0.19	-1.41	-2.22	-	-
	D	-6.12	-3.69	0.05	2.25	3.01	2.25	0.05	-3.69	-6.12	-	-
	I	-21.40	-7.25	-2.42	0.72	2.57	3.63	4.16	4.23	3.86	3.40	0.0
	II	-19.35	-12.50	-4.21	1.20	4.82	7.03	8.11	8.23	7.40	4.85	0.0
	III	-5.94	-4.51	-2.13	0.39	2.73	4.43	5.13	4.84	3.44	1.49	0.0
6 	A	-12.37	-3.21	0.05	2.34	3.08	2.34	0.05	-3.21	-12.37	-	-
	B	-2.59	-1.82	0.36	1.69	2.12	1.69	0.36	-1.82	-2.59	-	-
	C	-1.58	-1.02	0.13	1.01	1.33	1.01	0.13	-1.02	-1.58	-	-
	I	-14.75	-4.20	-0.84	1.25	2.28	2.59	2.28	1.25	-0.84	-4.20	-14.75
	II	-12.68	-7.30	-1.31	2.26	4.24	4.87	4.24	2.26	-1.31	-7.30	-12.68
	III	-3.44	-2.97	-0.77	1.29	2.63	3.08	2.63	1.29	-0.77	-2.97	-3.44

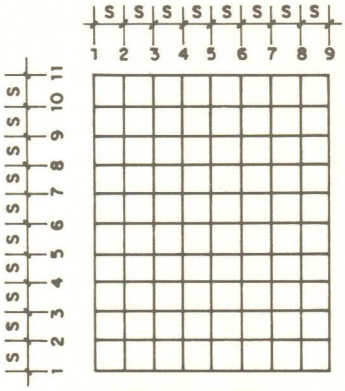


NERVIO TIPICO

TABLA Nº 7.32

LOSAS RETICULARES - RETICULO DE 8 x 10
COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P									
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11
1 	A	11.17	3.92	1.90	0.57	-0.57	-1.90	-3.92	-11.17	-	-
	B	5.86	5.80	3.00	0.95	-0.95	-3.00	-5.80	-5.86	-	-
	C	0.75	2.66	2.13	0.71	-0.71	-2.13	-2.66	-0.75	-	-
	D	-0.46	-0.70	-0.61	-0.24	+0.24	+0.61	+0.70	+0.46	-	-
	I	8.22	1.86	0.61	0.13	0.0	0.0	-0.13	-0.61	-1.86	-8.22
	II	6.75	5.82	2.92	1.33	0.36	-0.36	-1.33	-2.92	-5.82	-6.75
	III	1.52	3.31	2.85	1.61	0.51	-0.51	-1.61	-2.85	-3.31	-1.52
	IV	0.83	1.88	2.32	1.81	0.65	-0.65	-1.81	-2.32	-1.88	-0.83
2 	A	7.82	2.55	1.13	0.32	-0.32	-1.13	-2.55	-7.82	-	-
	B	8.29	3.83	1.69	0.55	-0.55	-1.69	-3.83	-8.29	-	-
	C	3.28	4.10	1.45	0.38	-0.38	-1.45	-4.10	-3.28	-	-
	D	1.82	2.63	1.84	0.55	-0.55	-1.84	-2.63	-1.82	-	-
	E	0.58	2.02	1.60	0.53	-0.53	-1.60	-2.02	-0.58	-	-
	I	18.03	9.23	5.46	3.14	1.83	1.02	0.41	-0.26	-1.34	-5.98
	II	4.92	8.39	6.57	4.76	3.01	1.53	0.16	-1.46	-3.89	-4.76
	III	-0.27	0.86	2.52	2.32	1.61	0.72	-0.25	-1.35	-1.90	-0.92

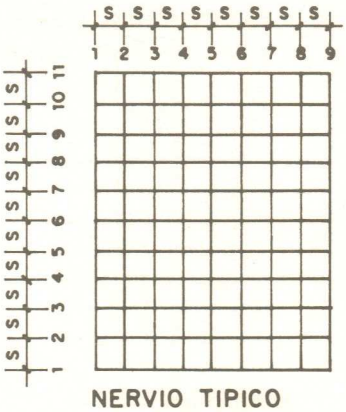


NERVIO TIPICO

TABLA Nº 7.32

LOSAS RETICULARES - RETICULO DE 8 x 10
COEFICIENTES DE FUERZA CORTANTE

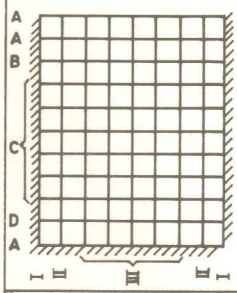
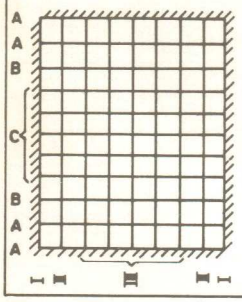
CASO	NERV.	ν = V/P									
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11
3	A	5.68	1.60	1.16	0.37	-0.37	-1.16	-1.60	-5.68	-	-
	B	6.48	2.98	1.33	0.42	-0.42	-1.33	-2.98	-6.48	-	-
	C	2.56	3.15	1.26	0.35	-0.35	-1.26	-3.15	-2.56	-	-
	D	1.48	2.24	1.62	0.51	-0.51	-1.62	-2.24	-1.48	-	-
	I	13.94	6.96	3.91	1.92	0.57	-0.57	-1.92	-3.91	-6.96	-13.94
	II	3.58	6.09	4.50	2.74	0.90	-0.90	-2.74	-4.50	-6.09	-3.58
	III	-0.05	0.59	1.49	1.12	0.40	-0.40	-1.12	-1.49	-0.59	+0.05
4	A	5.60	1.49	0.02	-1.26	-2.74	-4.79	-7.61	-14.10	-	-
	B	2.14	2.69	0.32	-0.91	-1.88	-2.88	-3.88	-1.20	-	-
	C	1.13	1.51	0.72	-0.44	-1.34	-2.02	-2.23	-1.09	-	-
	D	2.80	2.42	0.51	-1.04	-2.49	-3.85	-5.44	-3.41	-	-
	I	-4.18	-0.90	-0.10	0.32	0.69	1.20	2.10	3.73	6.37	12.67
	II	-3.59	-2.36	-1.21	0.03	1.15	2.34	3.67	5.05	6.61	4.18
	III	-2.32	-2.91	-1.01	0.08	0.91	1.78	2.71	3.49	3.49	0.42
	IV	-5.96	-2.92	-0.80	0.23	1.26	2.52	4.16	6.31	9.98	8.65
	V	-4.24	-0.34	-0.44	0.07	0.62	1.26	2.21	3.81	5.51	17.47

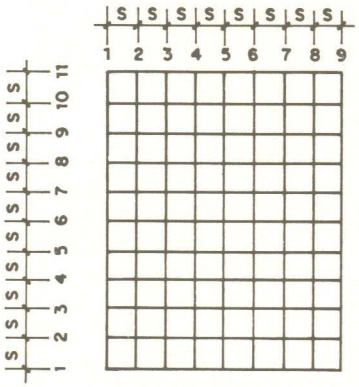


NERVIO TIPICO

TABLA Nº 7.32

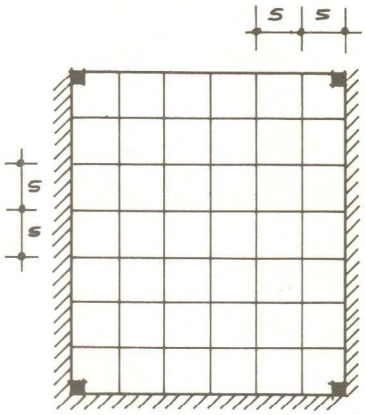
LOSAS RETICULARES - RETICULO DE 8 x 10
COEFICIENTES DE FUERZA CORTANTE

CASO	NERV.	ν = V/P									
		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11
5 	A	10.72	5.37	2.89	0.90	-0.90	-2.89	-5.37	-10.72	-	-
	B	1.19	3.04	1.66	0.52	-0.52	-1.66	-3.04	-1.19	-	-
	C	0.81	1.61	1.22	0.41	-0.41	-1.22	-1.61	-0.81	-	-
	D	2.43	3.74	2.21	0.76	-0.76	-2.21	-3.74	-2.43	-	-
	I	14.15	4.83	3.14	1.84	1.06	0.53	0.07	-0.37	-0.46	-3.41
	II	6.86	8.27	5.41	3.62	2.20	1.08	0.13	-0.83	-2.54	-4.85
	III	1.43	2.38	2.52	2.33	1.69	0.76	-0.33	-1.41	-1.94	-1.50
6 	A	9.16	3.26	2.29	0.74	-0.74	-2.29	-3.26	-9.16	-	-
	B	0.77	2.19	1.33	0.42	-0.42	-1.33	-2.19	-0.77	-	-
	C	0.56	1.15	0.88	0.31	-0.31	-0.88	-1.15	-0.56	-	-
	I	10.55	3.36	2.09	1.04	0.31	-0.31	-1.04	-2.09	-3.36	-10.55
	II	5.39	5.98	3.56	1.98	0.63	-0.63	-1.98	-3.56	-5.98	-5.39
	III	0.47	2.20	2.06	1.33	0.45	-0.45	-1.33	-2.06	-2.20	-0.47



NERVIO TIPICO

LOSAS RETICULARES



DETERMINAR:

EN EL RETICULO MOSTRADO VALORES DE MOMENTO Y FUERZA CORTANTE EN LOS NERVIOS DEL RETICULO.

DATOS:

SEPARACION ENTRE NERVIOS $S = .90$

CARGA POR NODO $P = 500$ Kg.

CASO DE CONTINUIDAD : 5

RETICULO DE 6×7 MODULOS.

A - USANDO LA TABLA CORRESPONDIENTE DE COEFICIENTE DE MOMENTOS M PARA RETICULO DE 6×7 MODULOS.

A-1. SE UBICA EL CASO DE CONTINUIDAD 5

A-2. SE TOMAN LOS COEFICIENTES M CORRESPONDIENTES A CADA NERVIO Y SE MULTIPLICAN POR P Y POR S OBTENIENDOSE LOS VALORES DE MOMENTOS.

ASI:

NERVIO "A"

μ apoyos $= -7.0$

M apoyos $= -7.0 \times 500 \times 0.90 = 3150$ K·m

μ max. tramo $= 1.22$

M max. tramo $= 1.22 \times 500 \times 0.90 = 549$ K·m

NERVIO "E"

μ apoyos $= -6.75$

M apoyos $= -6.75 \times 500 \times 0.90 = 3038$ K·m

μ max. tramo $= 1.44$

M max. tramo $= 1.44 \times 500 \times 0.90 = 648$ K·m

NERVIO I

w max. apoyo empotrado = -9.8

M apoyo empotrado = $-9.8 \times 500 \times 0.90$

NERVIO III

w max. apoyo empotrado = -8.39

M apoyo empotrado = $-8.39 \times 500 \times 0.90$

B- USANDO LA TABLA CORRESPONDIENTE DE COEFICIENTE DE FUERZA CORTANTE V PARA RETICULOS DE 6 x 7

B-1- SE UBICA EL CASO DE CONTINUIDAD : 5

B-2. SE TOMAN LOS COEFICIENTES CORRESPON- -DIENTES A CADA NERVIO Y SE MULTIPLICAN POR P y POR S OBTENIENDOSE LOS VALORES DE FUERZA CORTANTE.

ASI:

NERVIO "A"

V max. apoyos = 6.10

V max. apoyos = $6.10 \times 500 \times 0.90 = 2745$ K

NERVIO "B"

V max. apoyos = 4.24

V max. apoyos = $4.24 \times 500 \times 0.90 = 1.908$ K

NERVIO "E"

V max. apoyos = 5.36

V max. apoyos = $5.36 \times 500 \times 0.90 = 2.412$ K

NERVIO "I"

V en apoyo empotrado = 7.21

V en apoyo empotrado = $7.21 \times 500 \times 0.90 = 3245$ K

NERVIO "III"

V max. = 1.54

V max. = $1.54 \times 500 \times 0.90 = 693$ K

SE ADOPTA:

EST.: ϕ 3/8" c. 15 cms.

ESTA CANTIDAD DE ESTRIBOS SE EXTENDERA HASTA UNA DISTANCIA 4d DESDE LA CARA DEL APOYO. LUEGO SE PUEDE CALCULAR OTRA SEPARACION "S", CON EL CORTE NOMINAL A ESA DISTANCIA.

B- POR TABLAS

B-1) SE CALCULA EL CORTE NOMINAL

$$Vn = \frac{Vu}{\phi} = \frac{32.000}{0.85} = 37.647 \text{ K.}$$

B-2) DE LA TABLA ENTRANDO CON $h = 65$ y $bw = 40$ SE OBTIENE EL CORTE RESISTIDO POR EL CONCRETO

$$\phi Vc = 17.095 \text{ K.}$$

B-3) SE CALCULA EL VALOR DE Vs

$$\phi Vs = Vu - \phi Vc = 32.000 - 17.095 = 14.905 \text{ K.}$$

$$Vs = \frac{14.905}{0.85} = 17.535 \text{ K.}$$

B-4) DE LA TABLA ENTRANDO CON $h = 65$ y UN VALOR CERCANO a Vs (QUE EN ESTE CASO SERIA 17.892 K.) SE OBTIENE UNA SEPARACION DE ESTRIBOS DE ϕ 3/8" IGUAL A 20 cms.

B-5) COMO SE TRATA DE VIGA RESISTENTE A SISMO NO SE PERMITE UNA SEPARACION MAYOR QUE $\frac{d}{4}$; POR TANTO SE ADOPTAN ESTRIBOS DE ϕ 3/8" CADA 15 cms.